EKDMOS V2.1

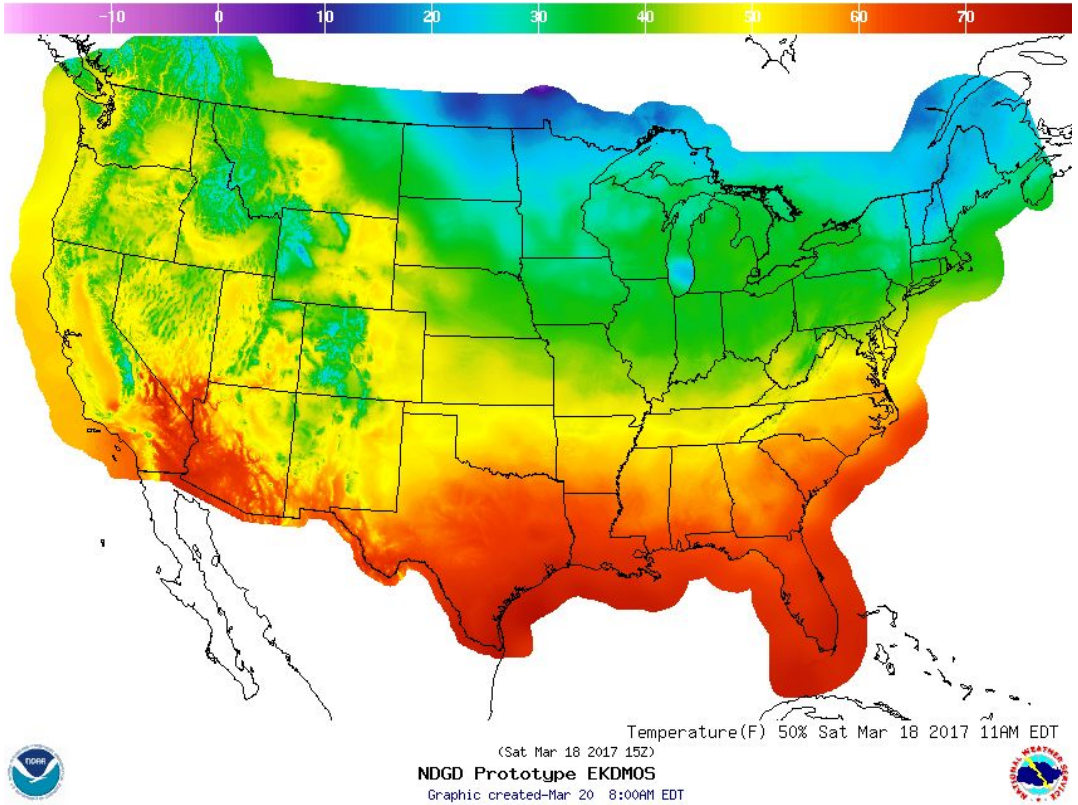
September 2017

MDL Statistical Modeling Branch

EKDMOS V2.1 - What's Changing

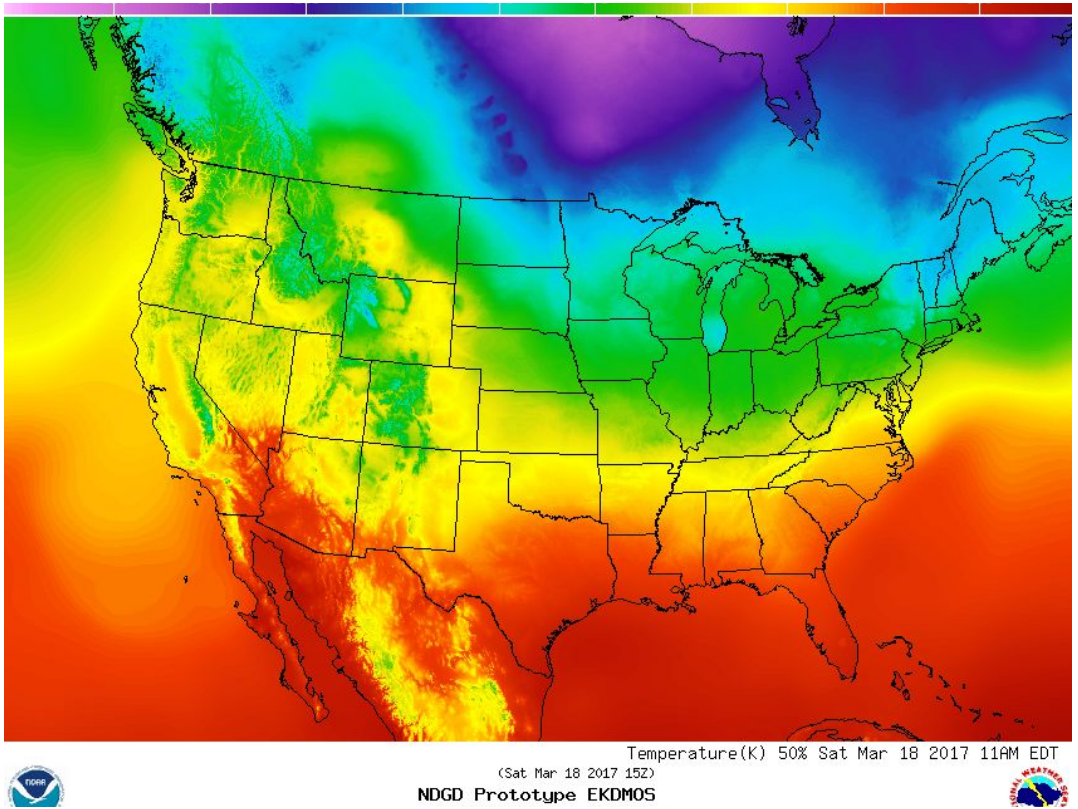
- Implementation in September 2017
- EKDMOS CONUS data expanded to full grid for use by NBM
- Clipped grids will continue to be disseminated to conserve space on the SBN
- Clipped grids were expanded to the west to include offshore marine zones
- This upgrade does not include any changes to station data or equations
- No changes were made to the Alaska, Hawaii, or Puerto Rico grids

EKDMOS V2.0 - 111-Hr 50% Temperature (F)



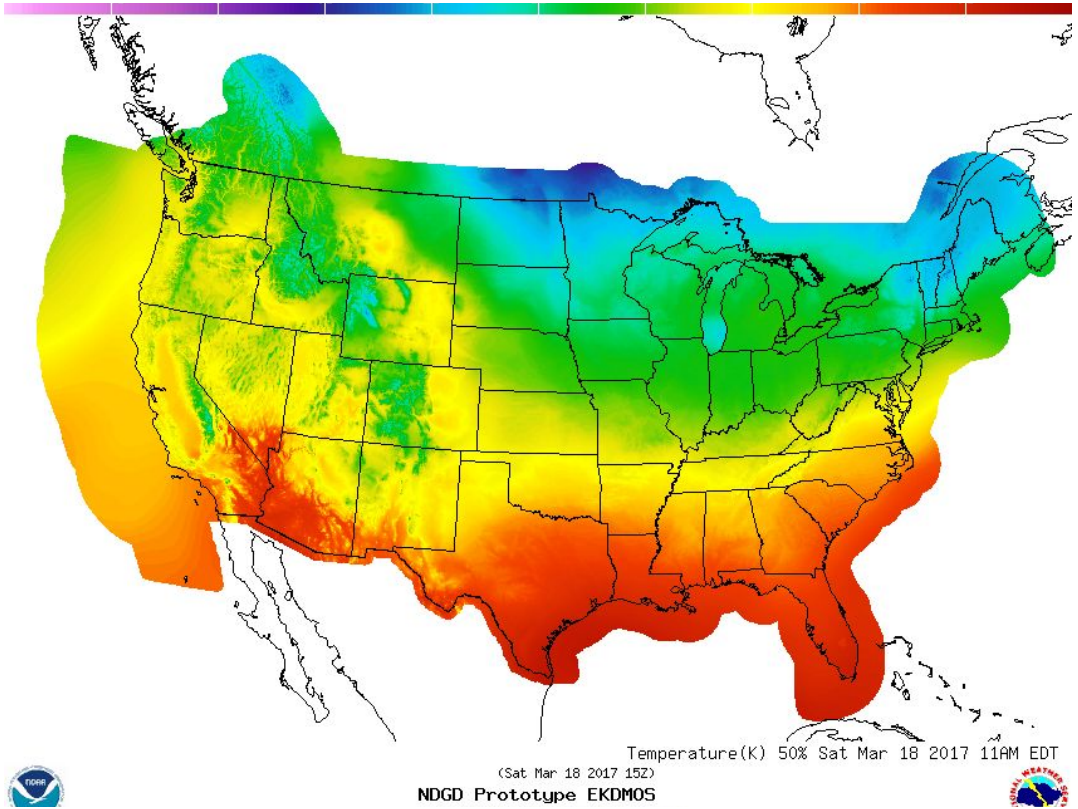
Currently available

EKDMOS V2.1 - 111-Hr 50% Temperature (K)



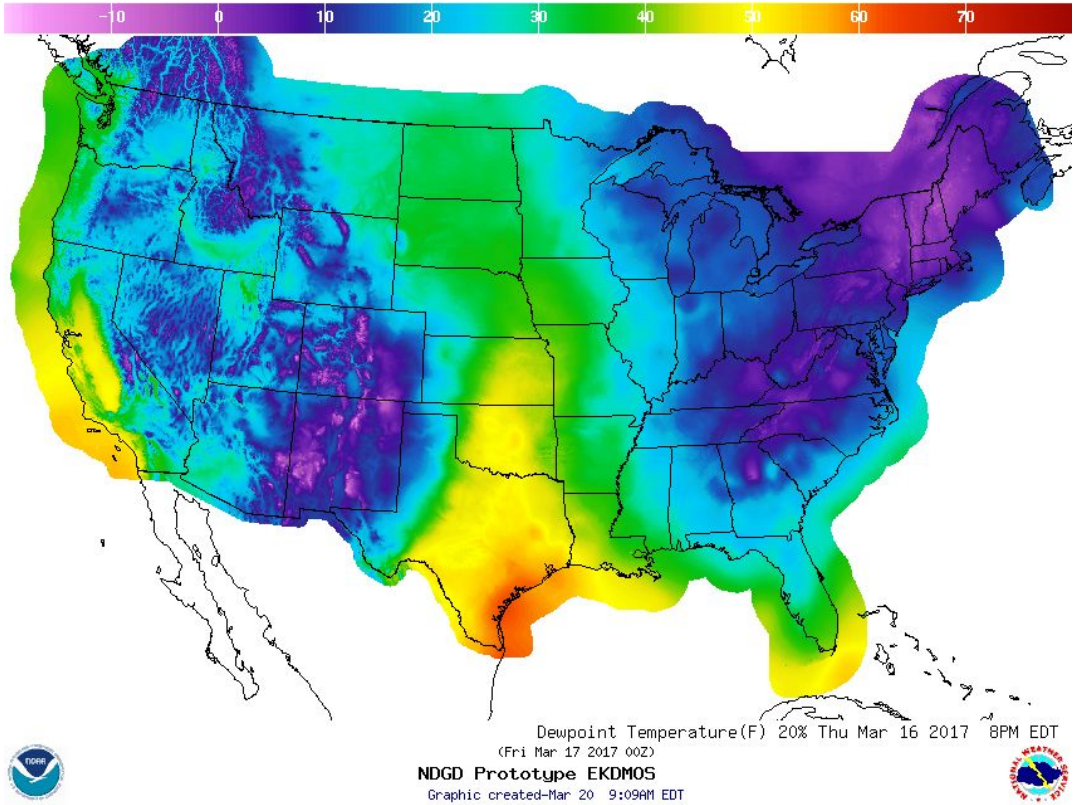
Available for NBM

EKDMOS V2.1 - 111-Hr 50% Temperature (F)



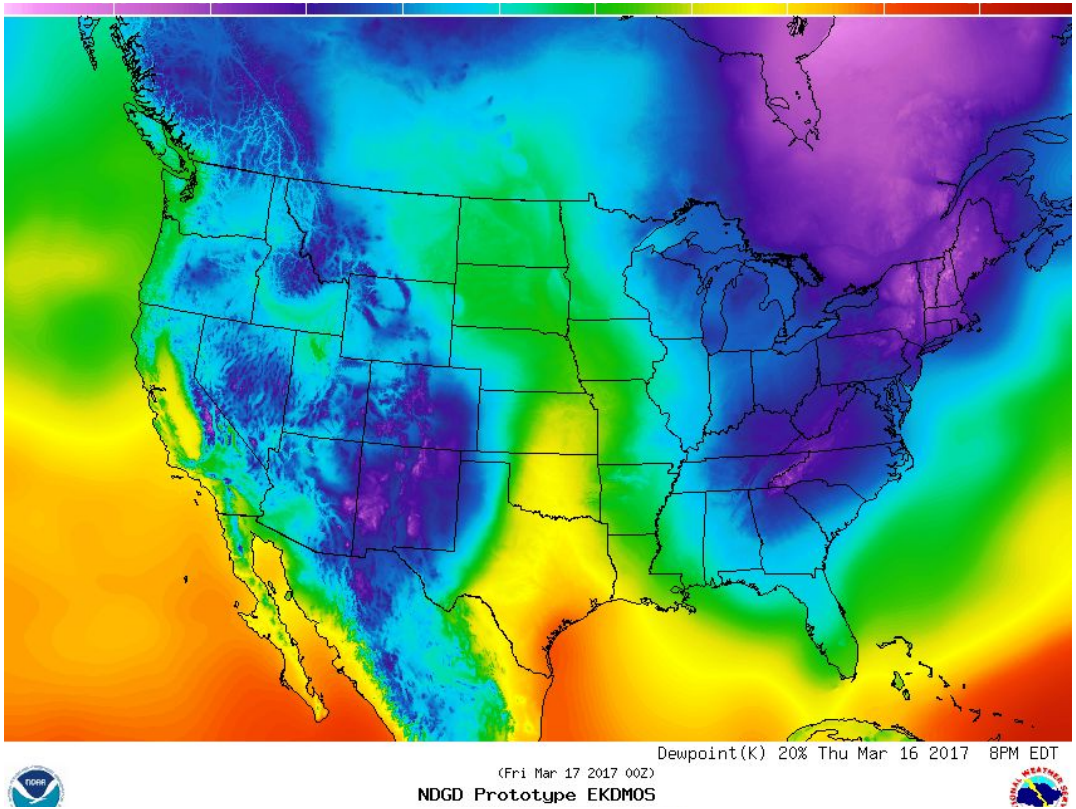
Available on SBN in Sept 2017

EKDMOS V2.0 - 72-Hr 20% Dewpoint (F)



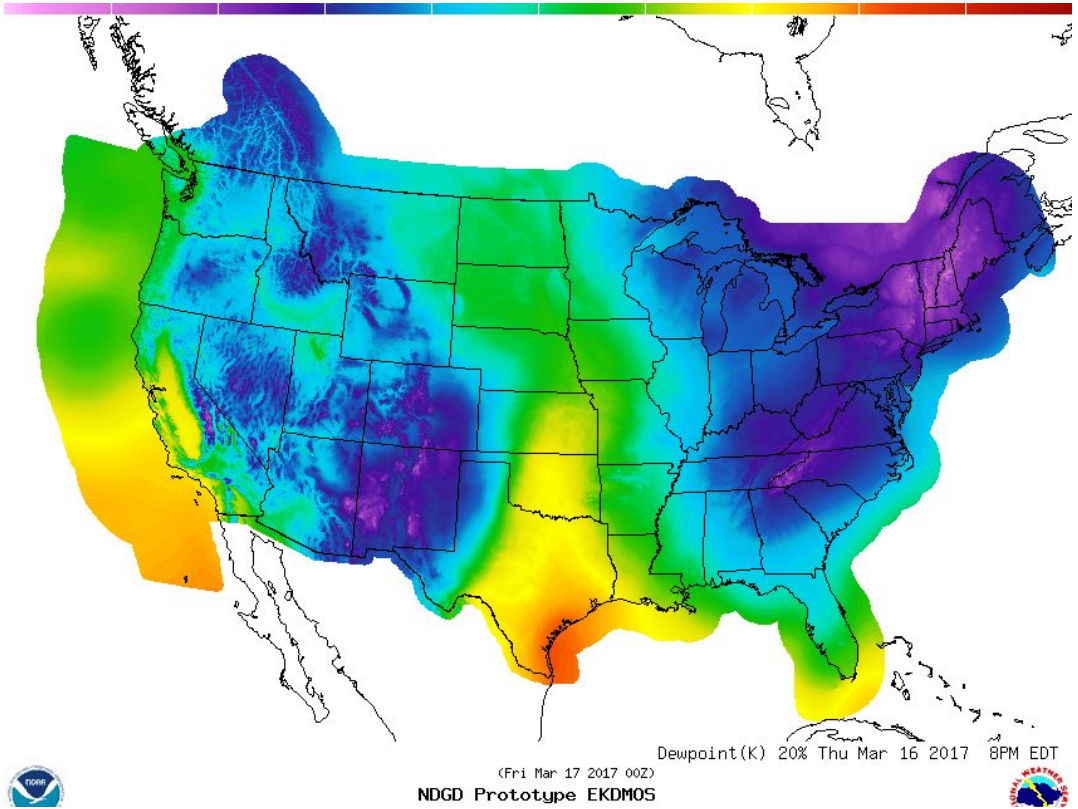
Currently available

EKDMOS V2.1 - 72-Hr 20% Dewpoint (K)



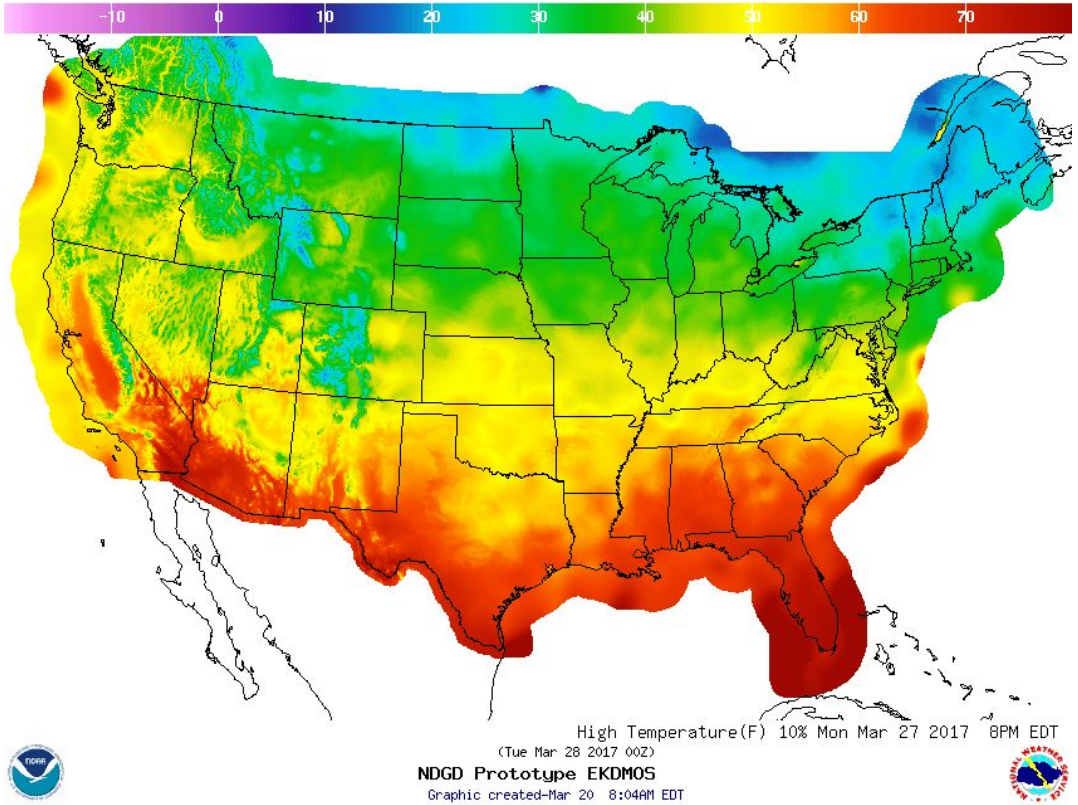
Available for NBM

EKDMOS V2.1 - 72-Hr 20% Dewpoint (F)



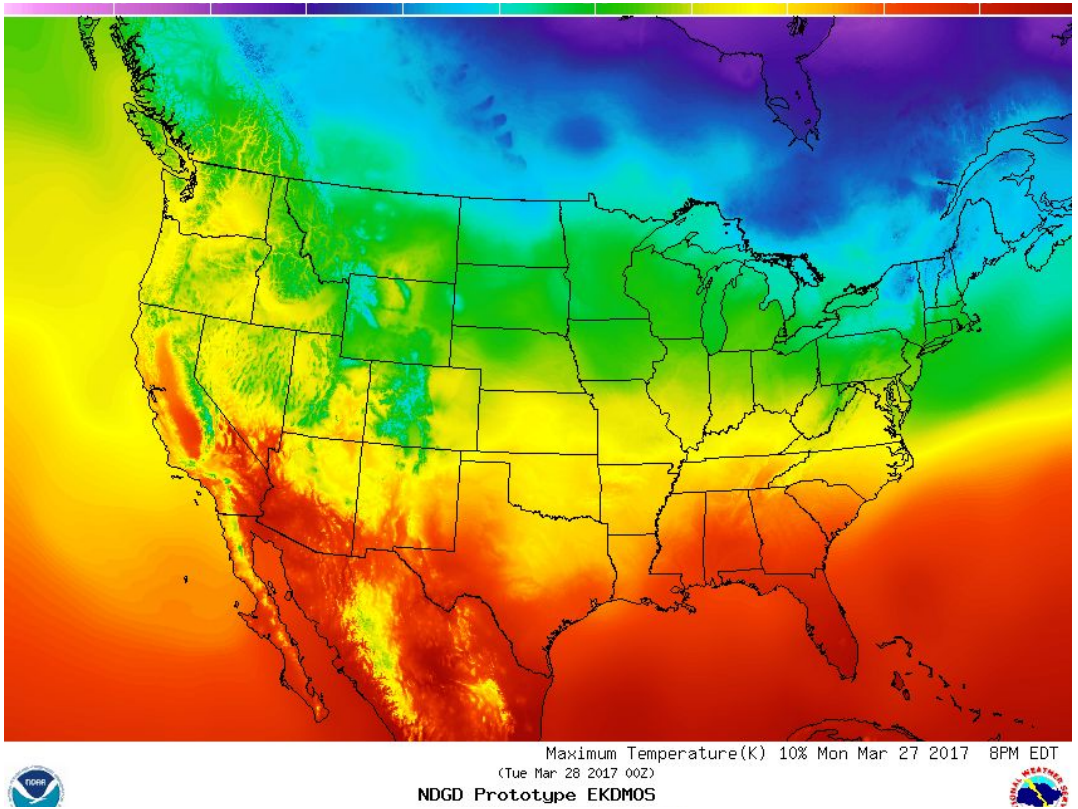
Available on SBN in Sept 2017

EKDMOS V2.0 - 336-Hr 10% Max Temperature (F)



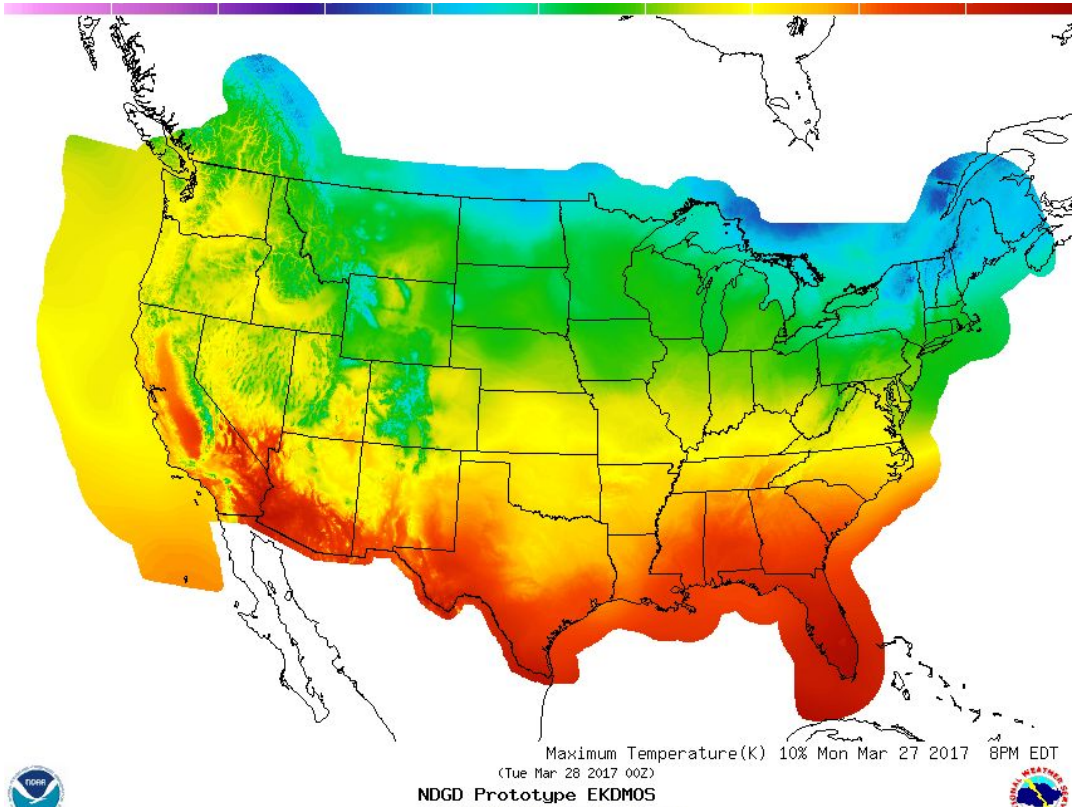
Currently available

EKDMOS V2.1 - 336-Hr 10% Max Temperature (K)



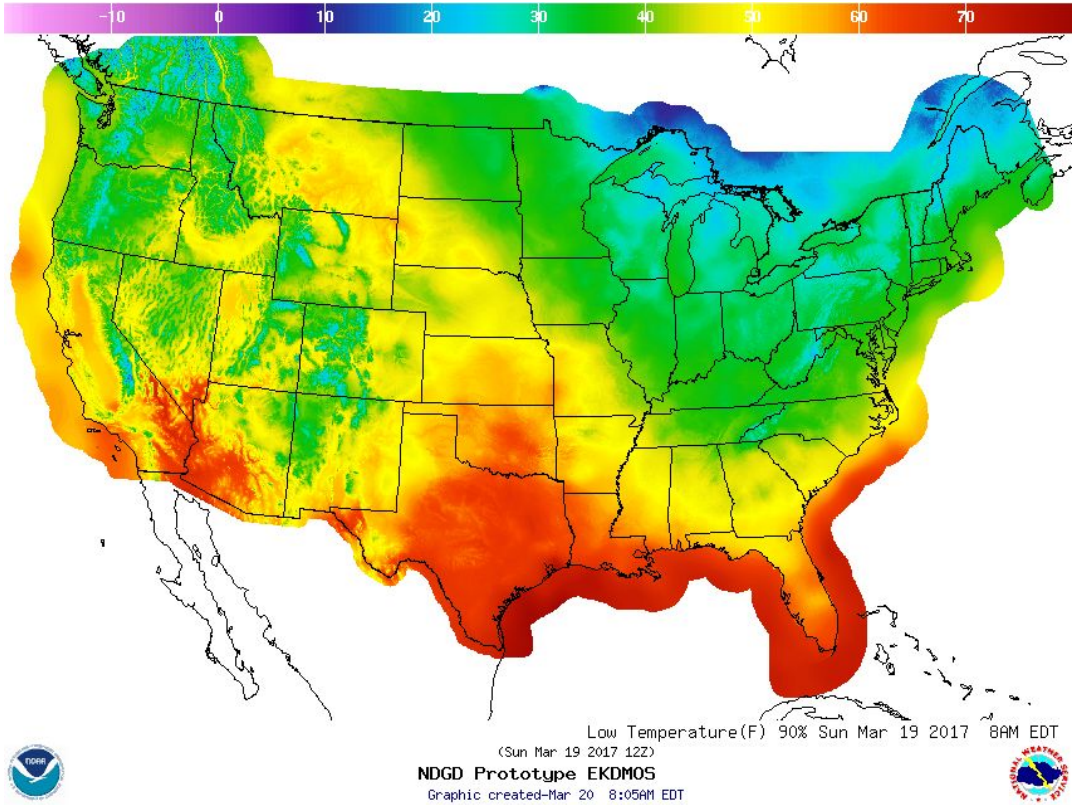
Available for NBM

EKDMOS V2.1 - 336-Hr 10% Max Temperature (F)



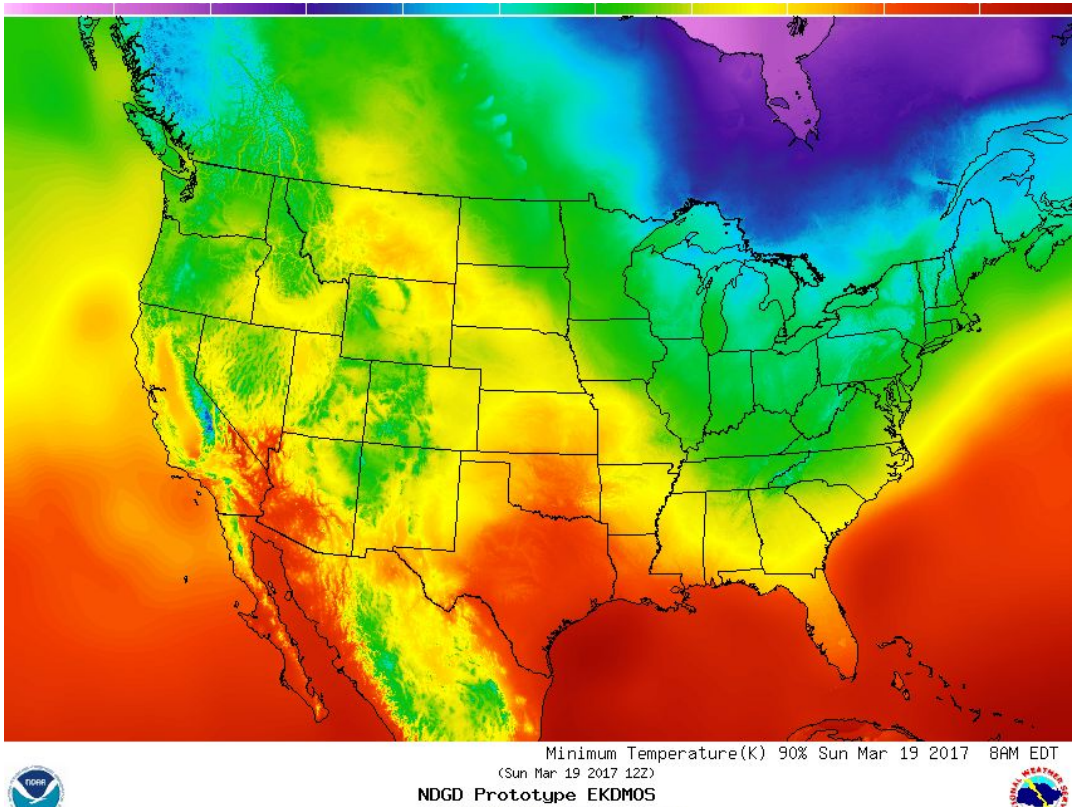
Available on SBN in Sept 2017

EKDMOS V2.0 - 132-Hr 90% Min Temperature (F)



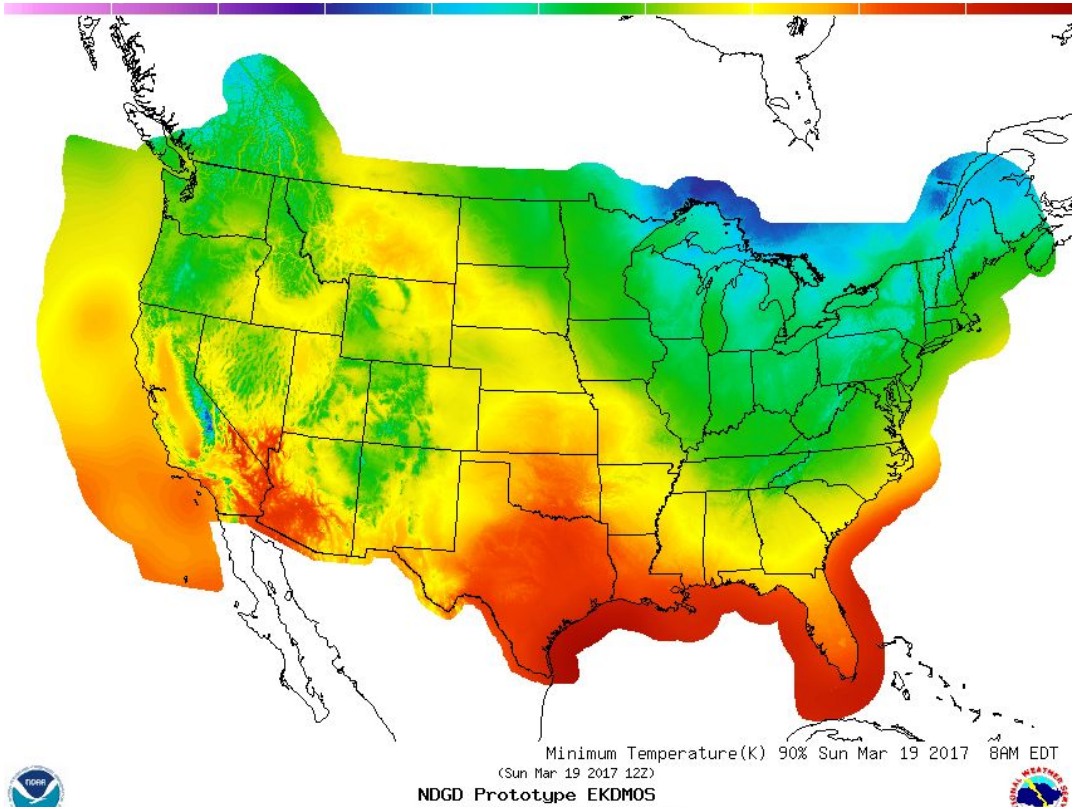
Currently available

EKDMOS V2.1 - 132-Hr 90% Min Temperature (K)



Available for NBM

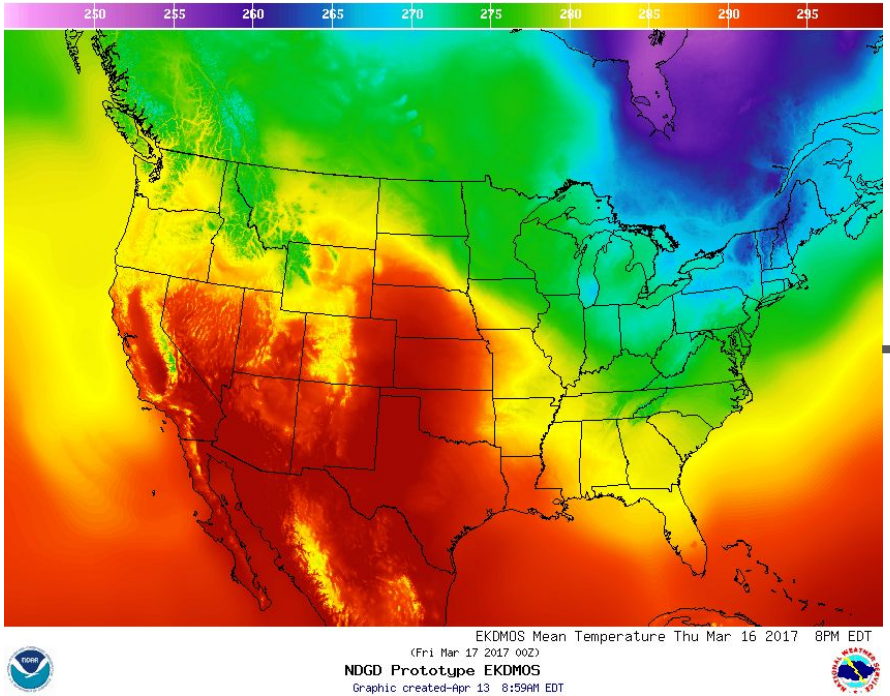
EKDMOS V2.1 - 132-Hr 90% Min Temperature (F)

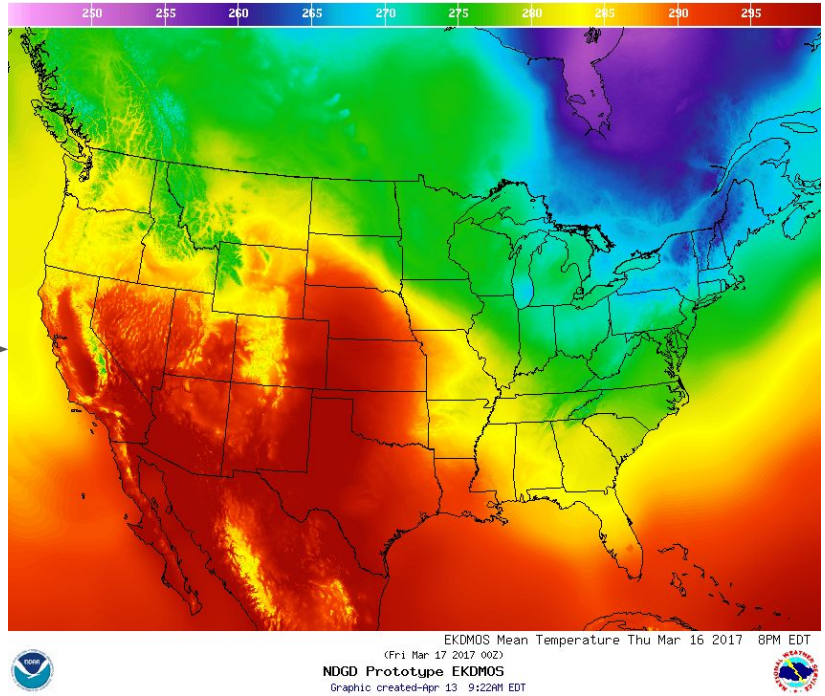


Available on SBN in Sept 2017

Verification

EKDMOS V2.1 grids were first clipped to match the operational URMA

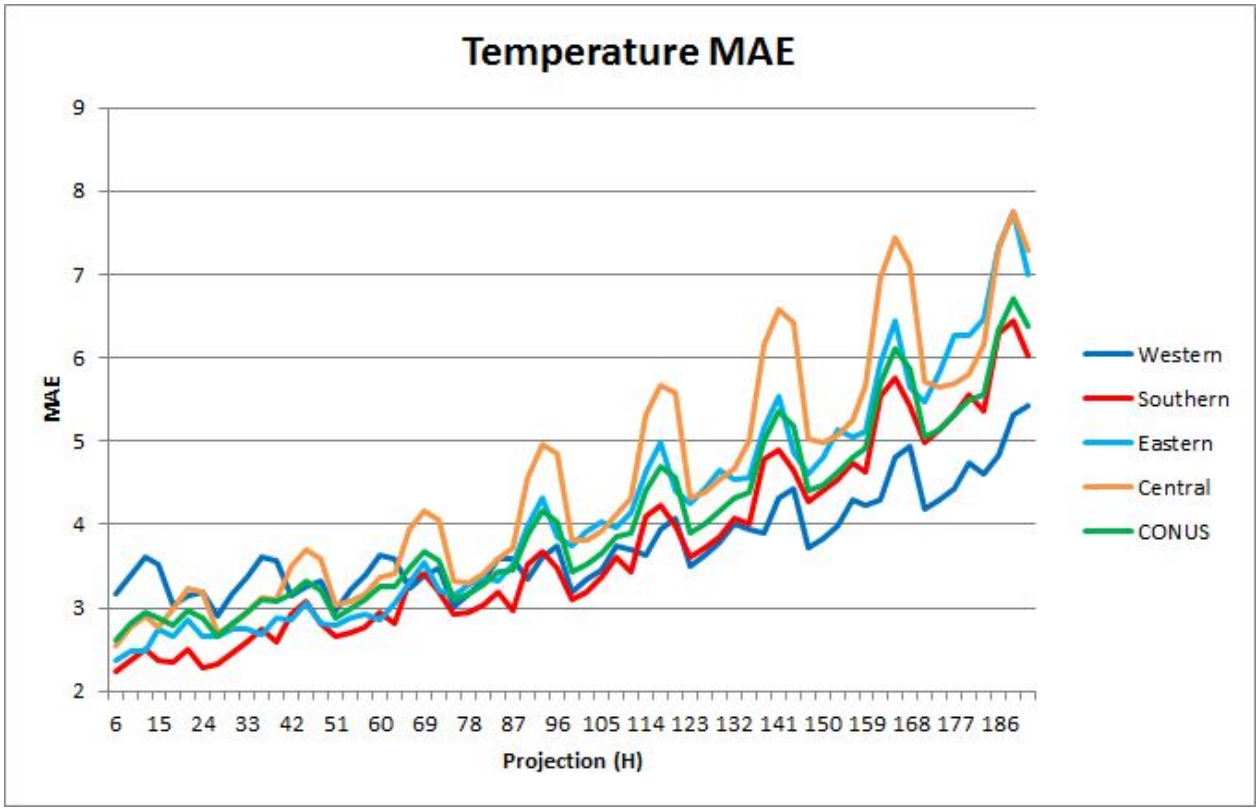




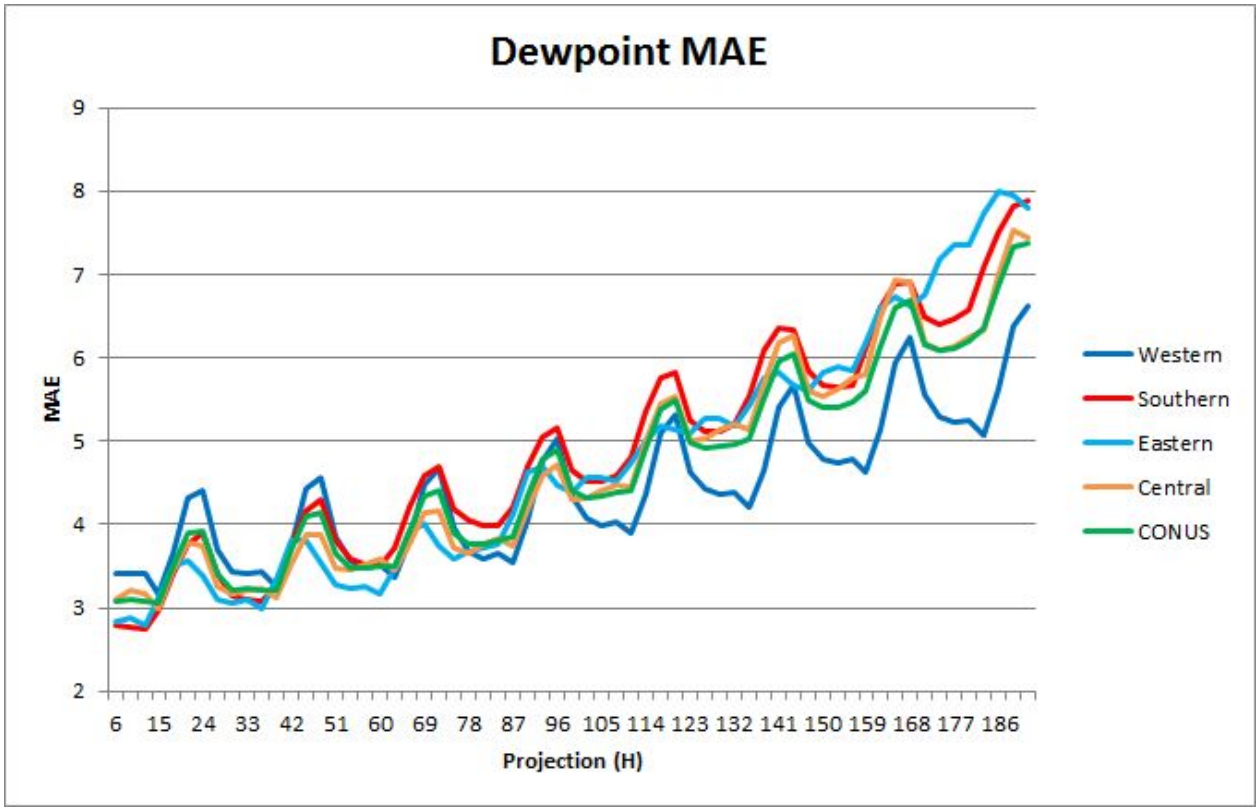
Verification Notes

- Verification performed for March 2017
- URMA grids were used as a “proxy for truth” for the overall CONUS as well as the Eastern, Central, Southern, and Western regions
  - Note that EKDMOS is tuned to station data, then analysed using the BCDG technique
  - EKDMOS is not tuned to URMA for this set of verification

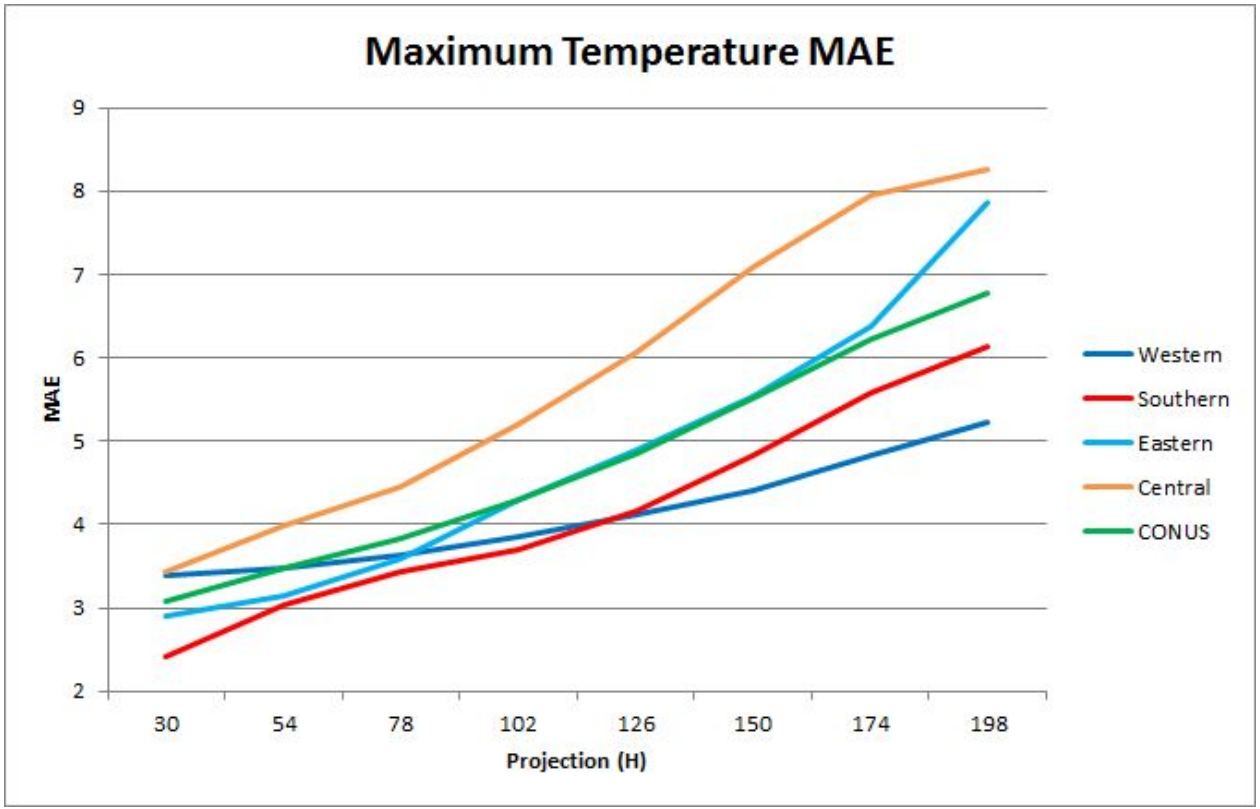
MAE - Temperature Mean - March 2017



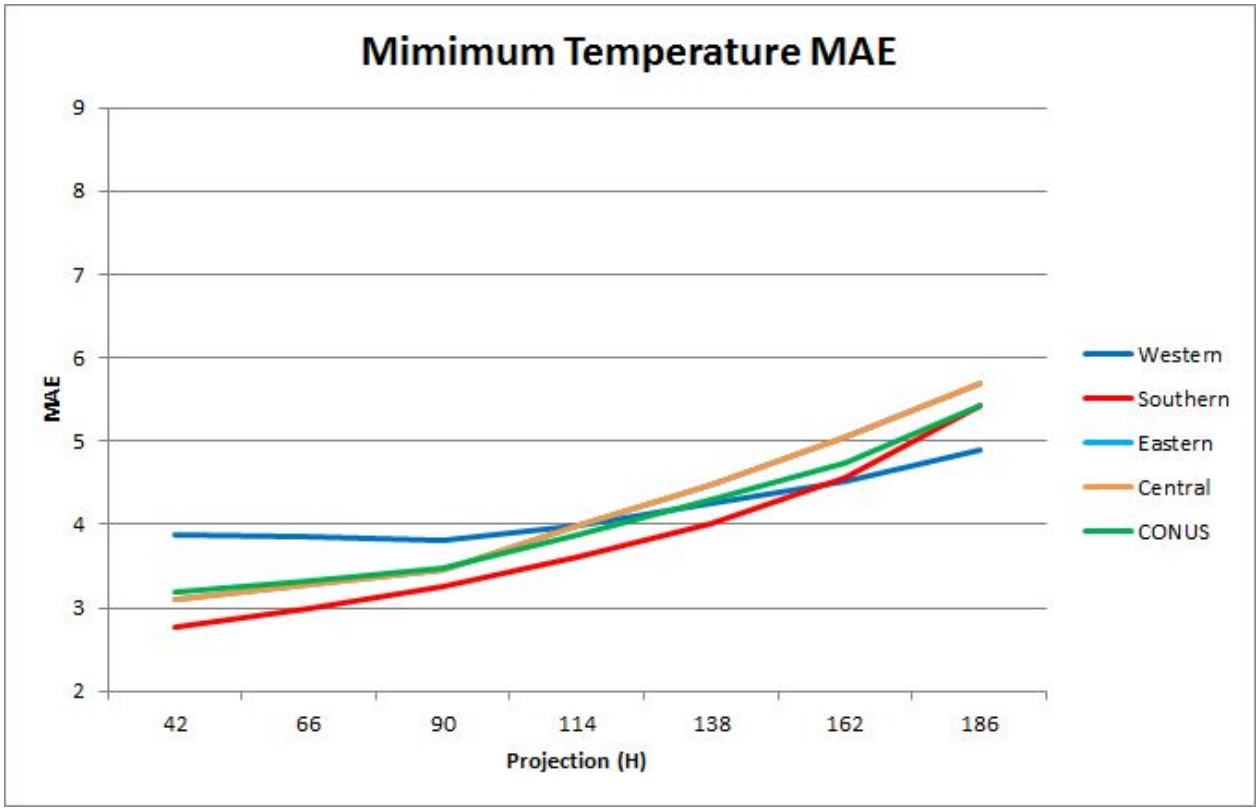
MAE - Dewpoint Mean - March 2017



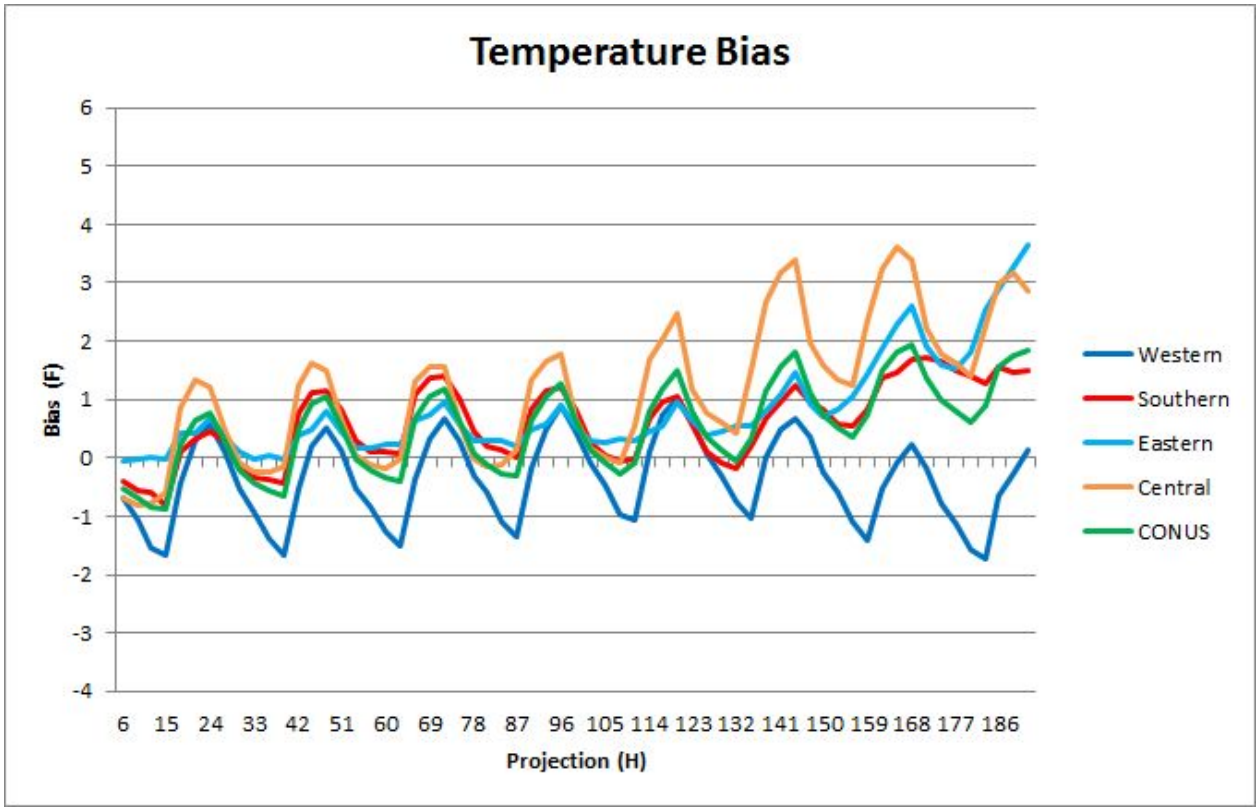
MAE - Daytime Maximum Temperature Mean - March 2017



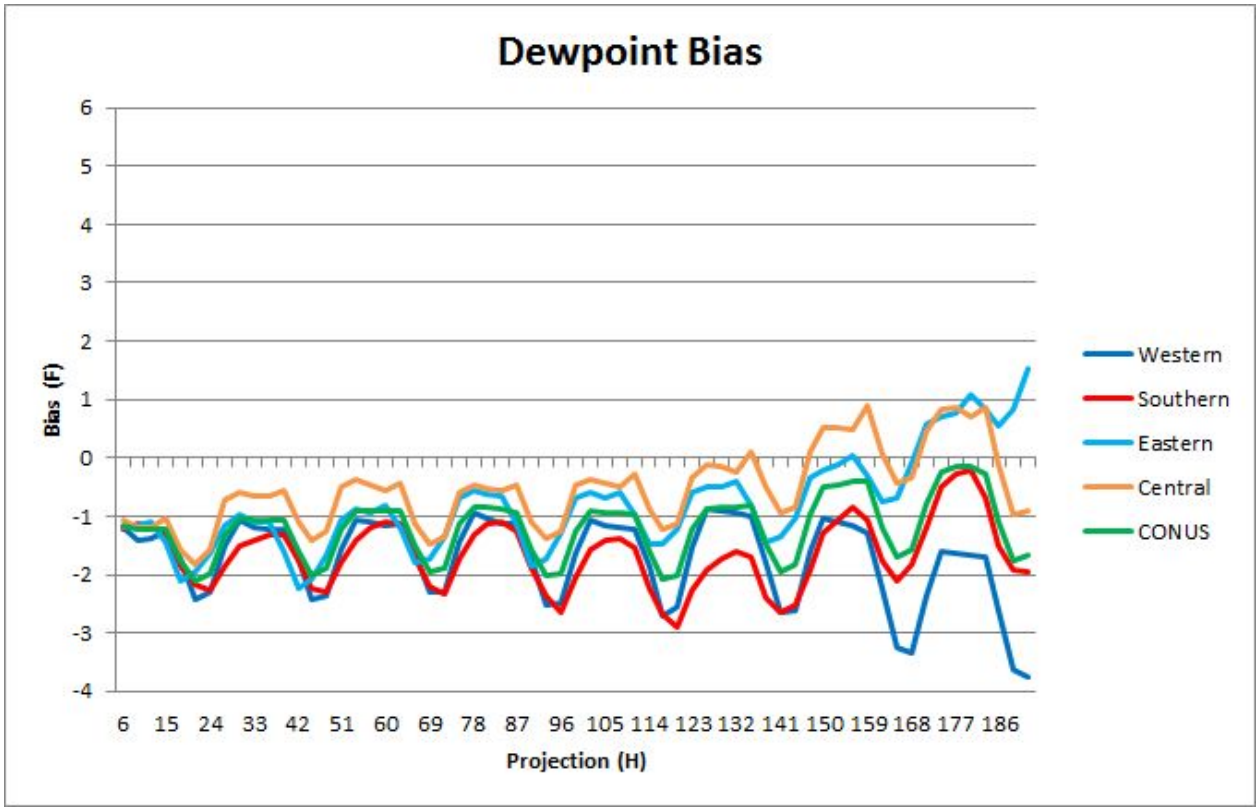
MAE - Nighttime Minimum Temperature Mean - March 2017



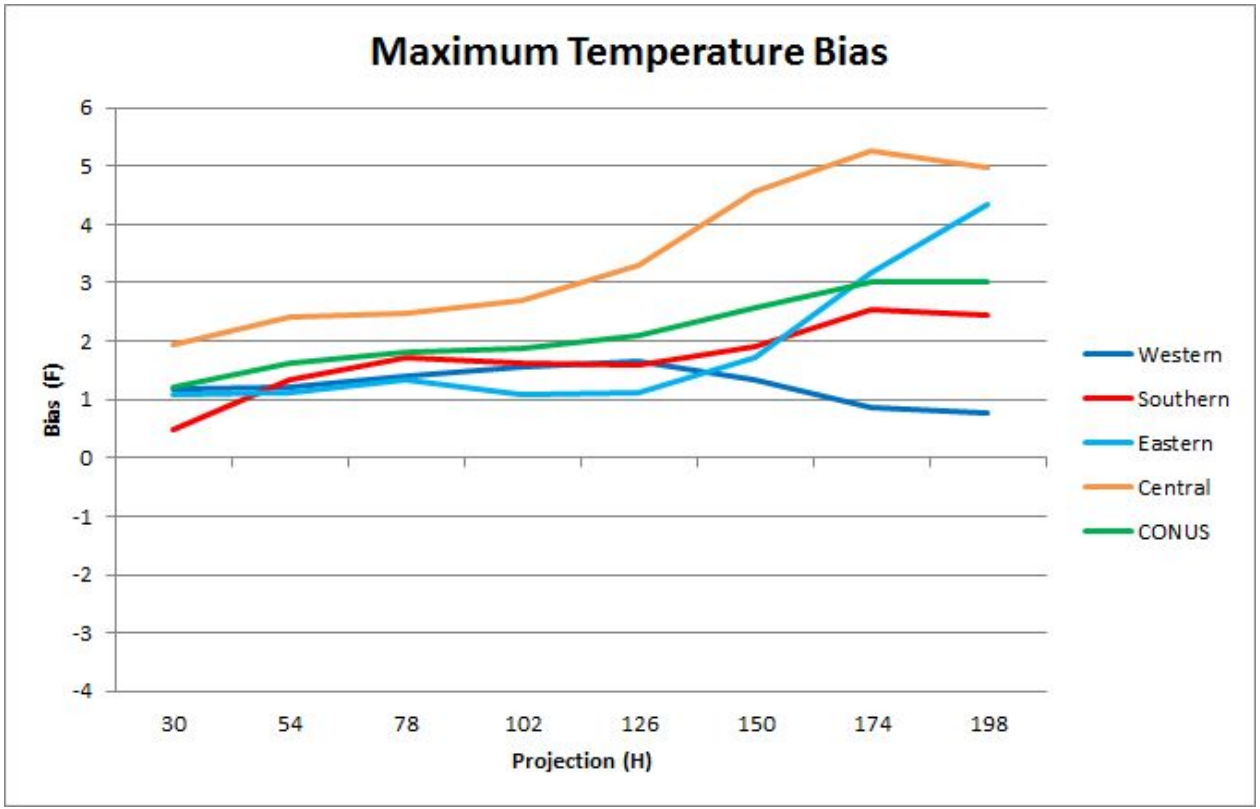
Bias - Temperature Mean - March 2017



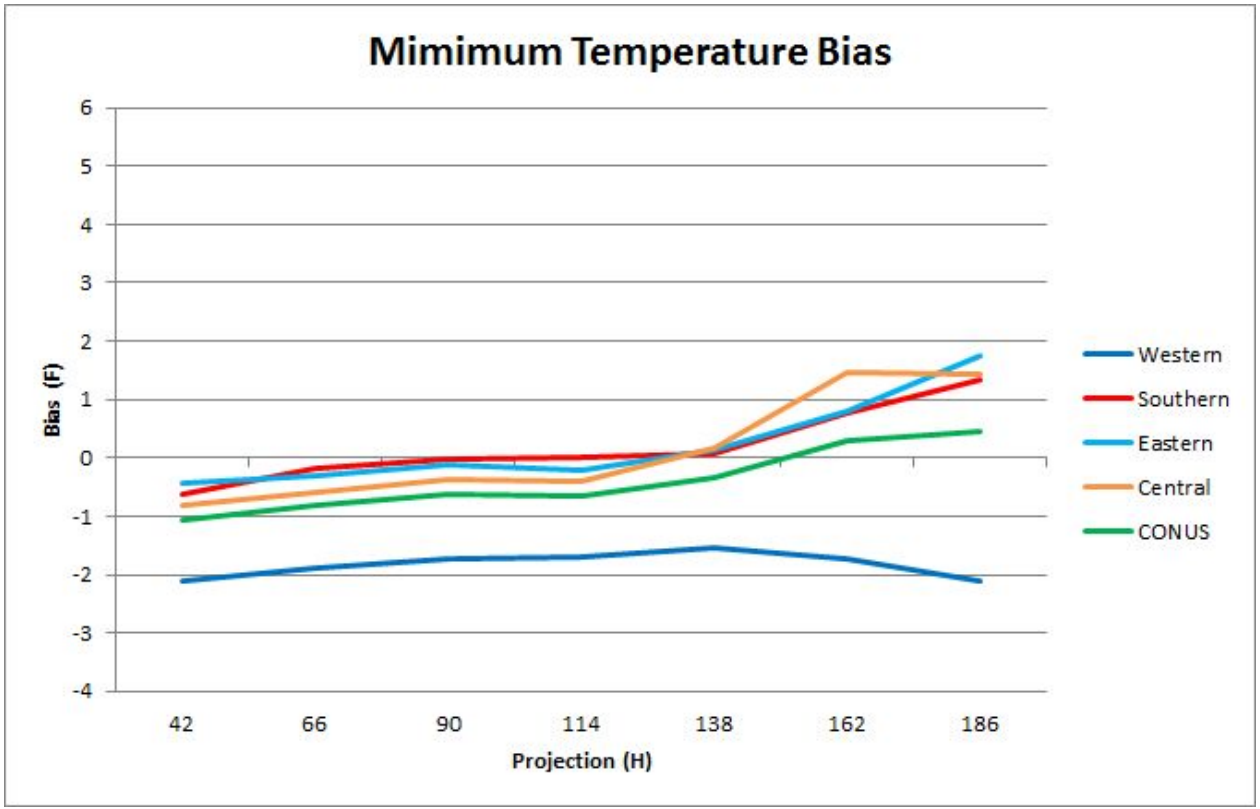
Bias - Dewpoint Mean - March 2017



Bias - Daytime Maximum Temperature Mean - March 2017



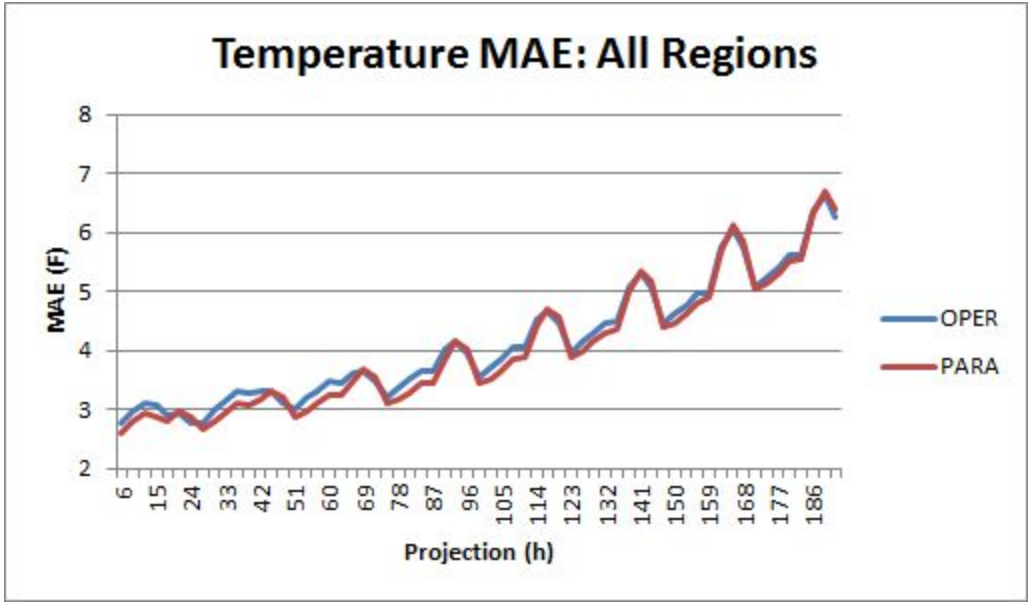
Bias - Nighttime Minimum Temperature Mean - March 2017



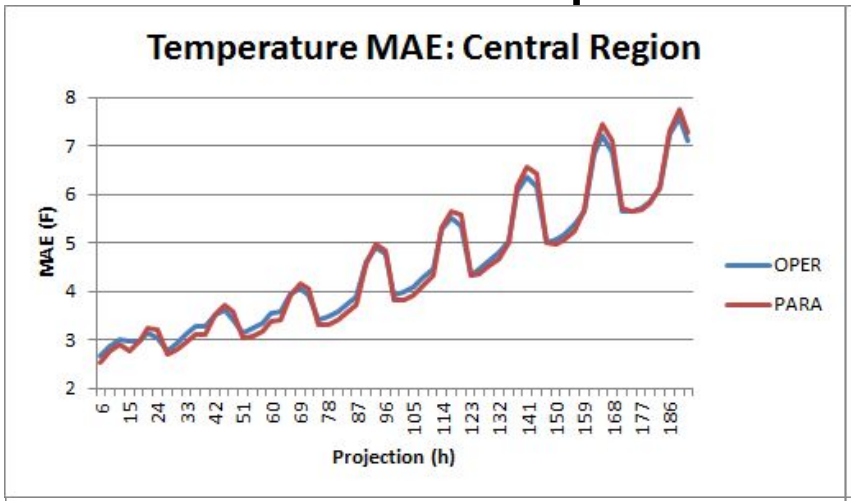
Verification Notes

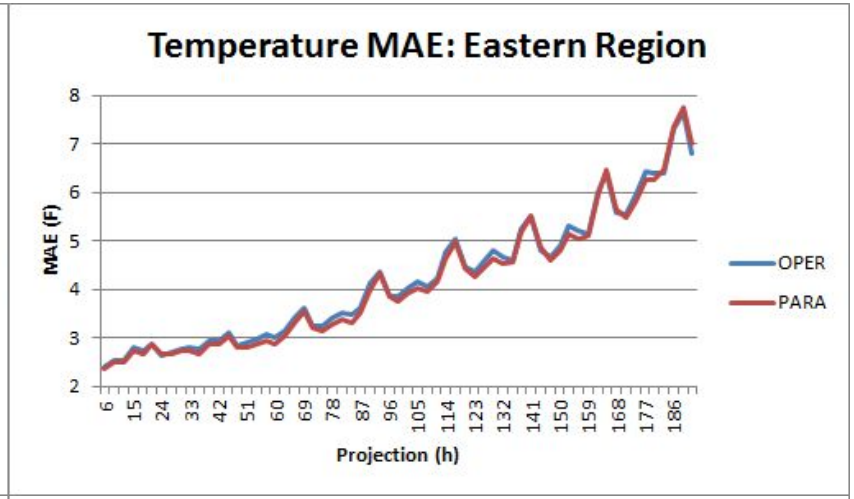
- Verification performed for March 2017
- Comparing Operational EKDMOS (V2.0) to the Parallel EKDMOS (V2.1)
- URMA grids were used as a “proxy for truth” for the overall CONUS as well as the Eastern, Central, Southern, and Western regions
    - Note that EKDMOS is tuned to station data, then analysed using the BCDG technique
    - EKDMOS is not tuned to URMA for this set of verification

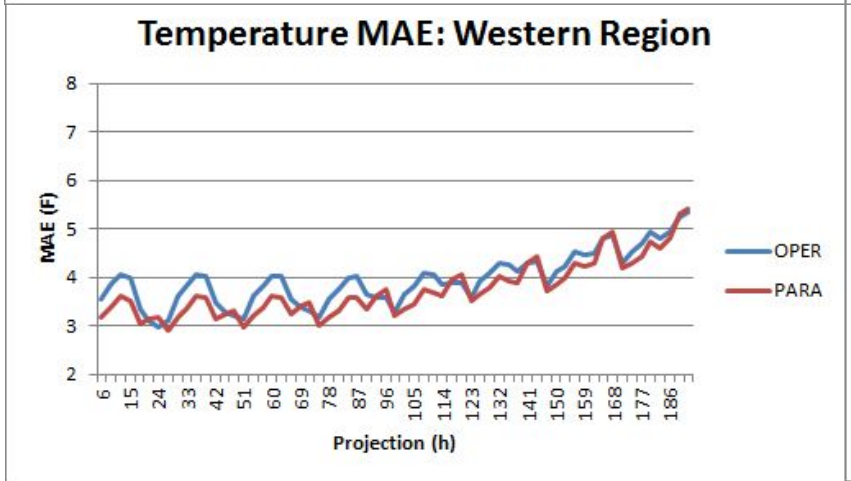
MAE - Temperature Mean - March 2017

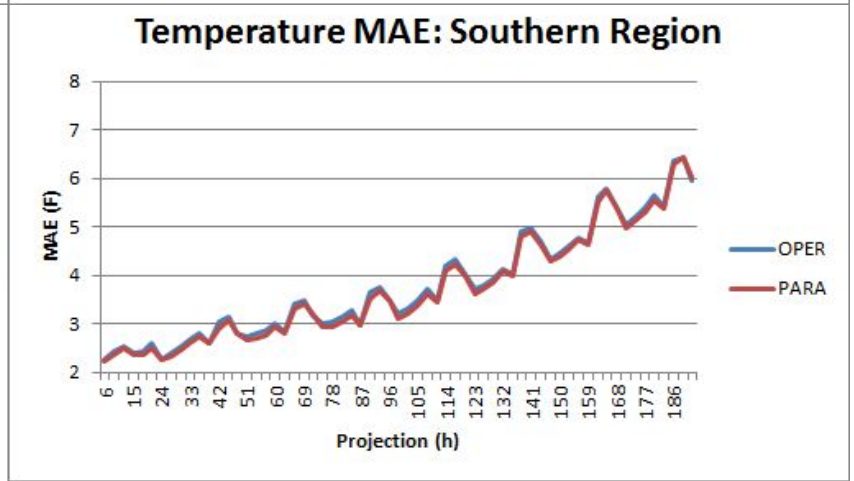


MAE - Temperature Mean - March 2017

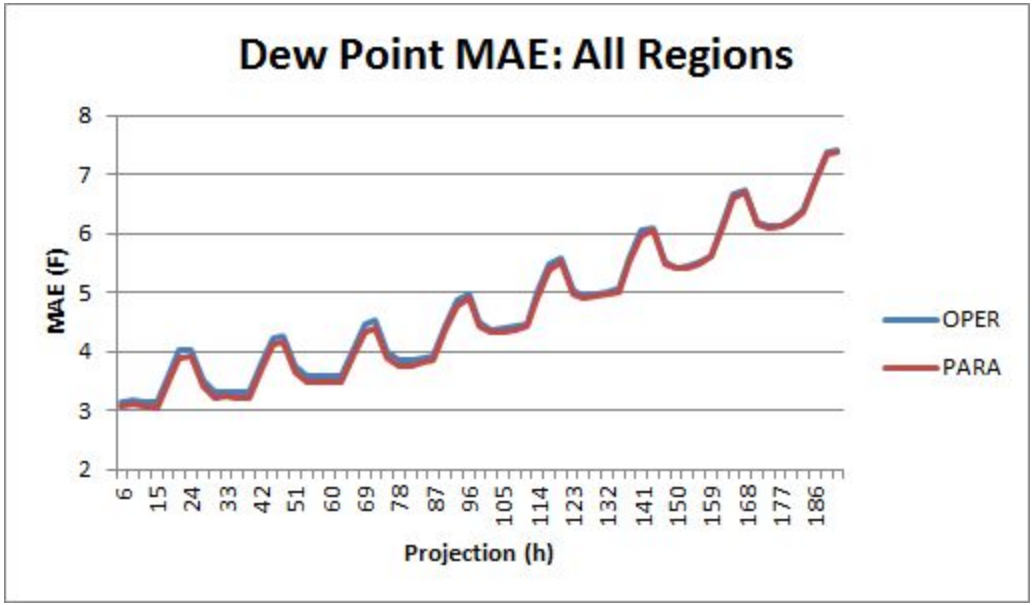




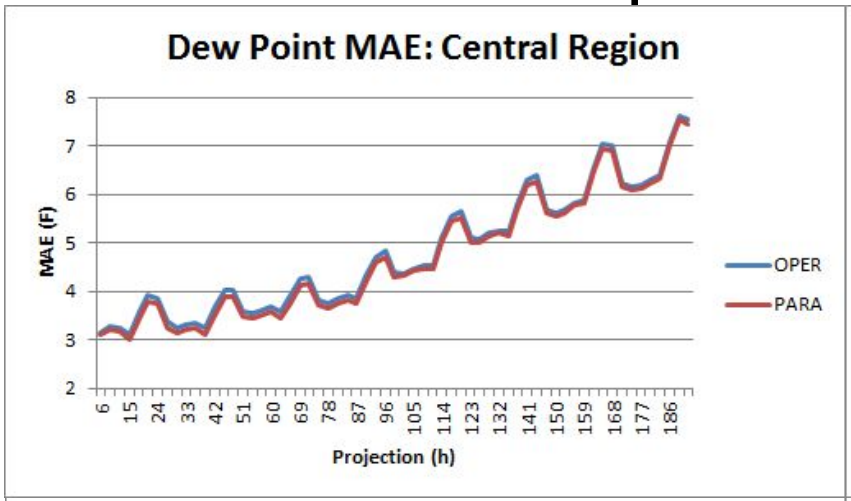


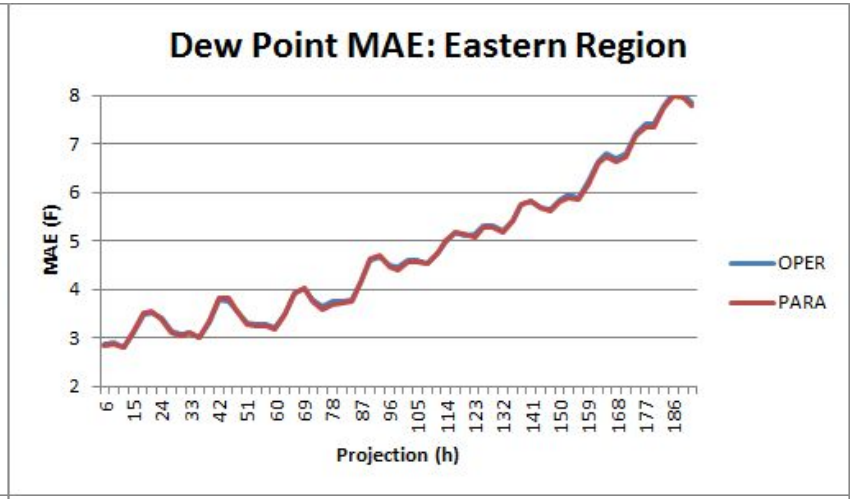


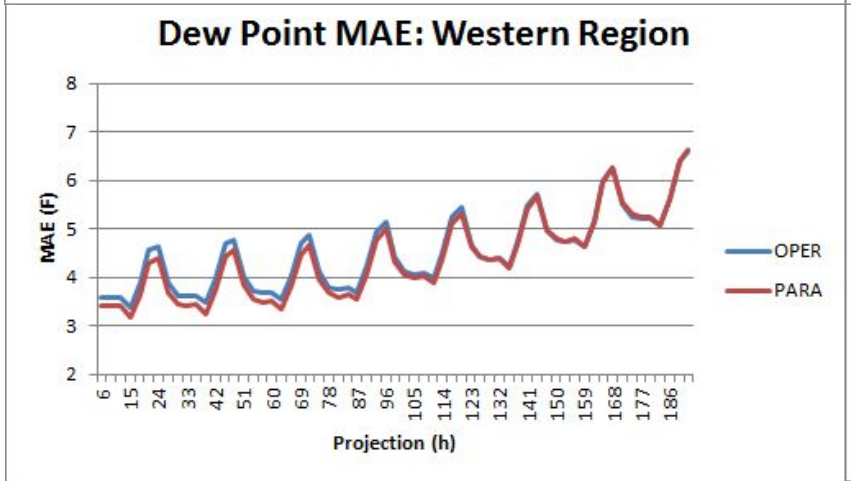
MAE - Dewpoint Mean - March 2017

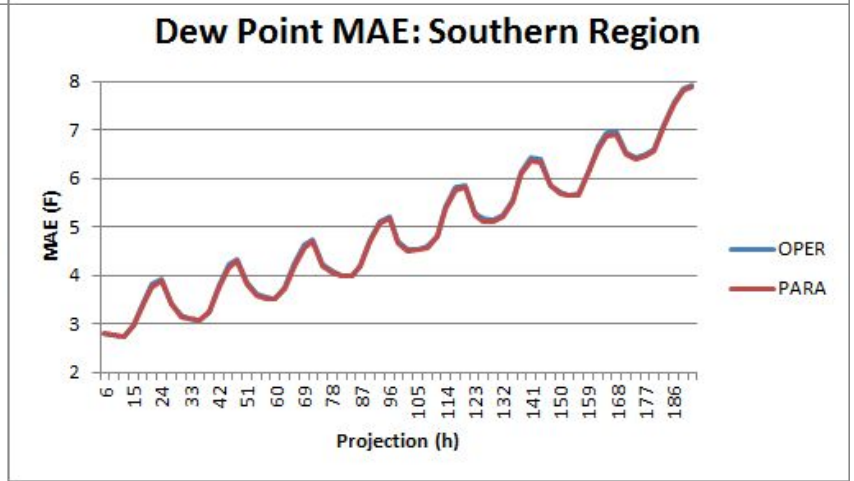


MAE - Dewpoint Mean - March 2017

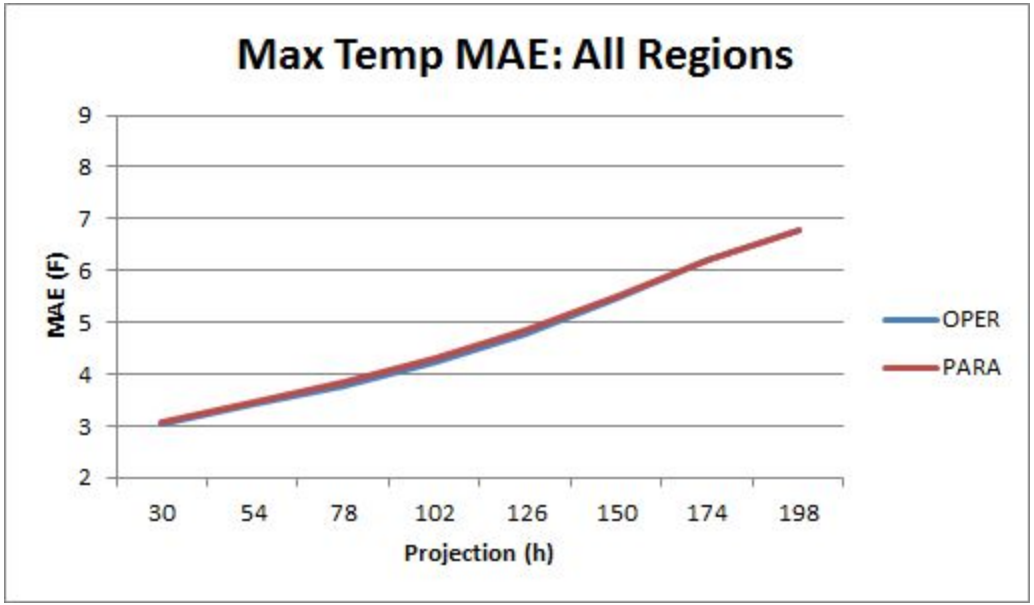




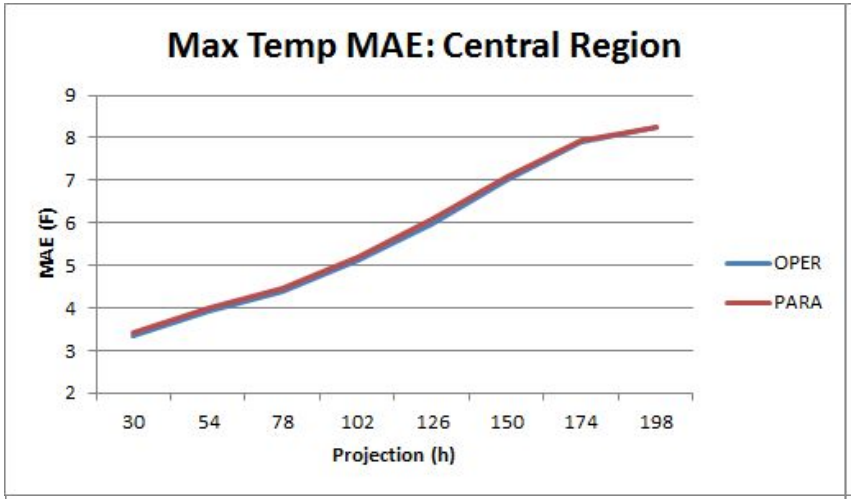


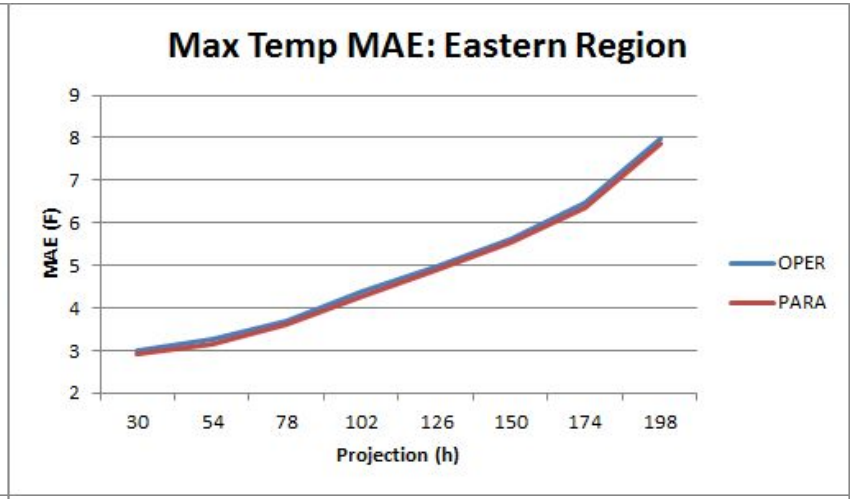


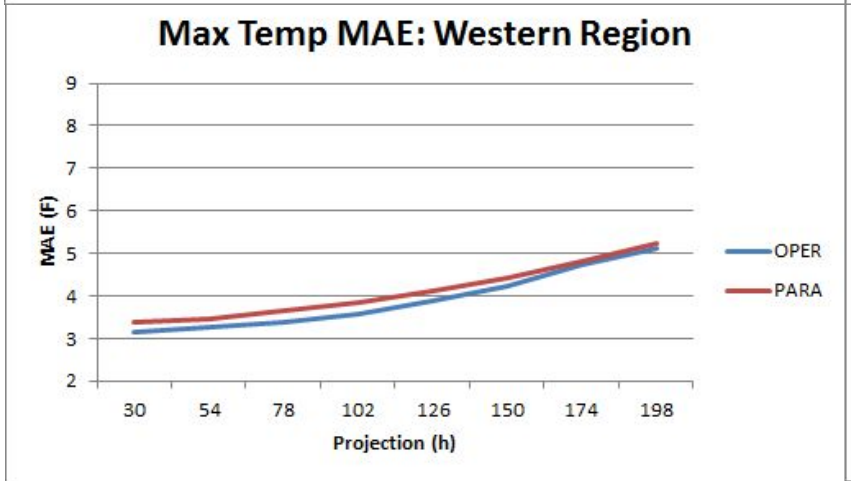
MAE - Daytime Maximum Temperature Mean - March 2017

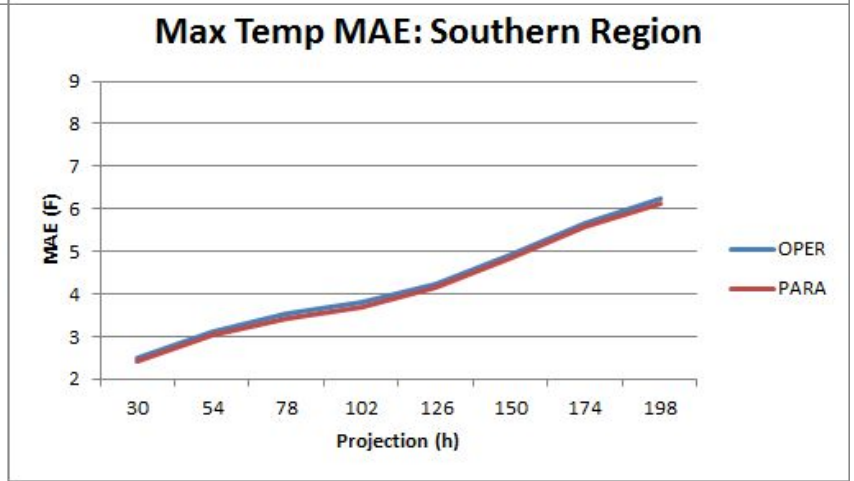


MAE - MaxT Mean - March 2017

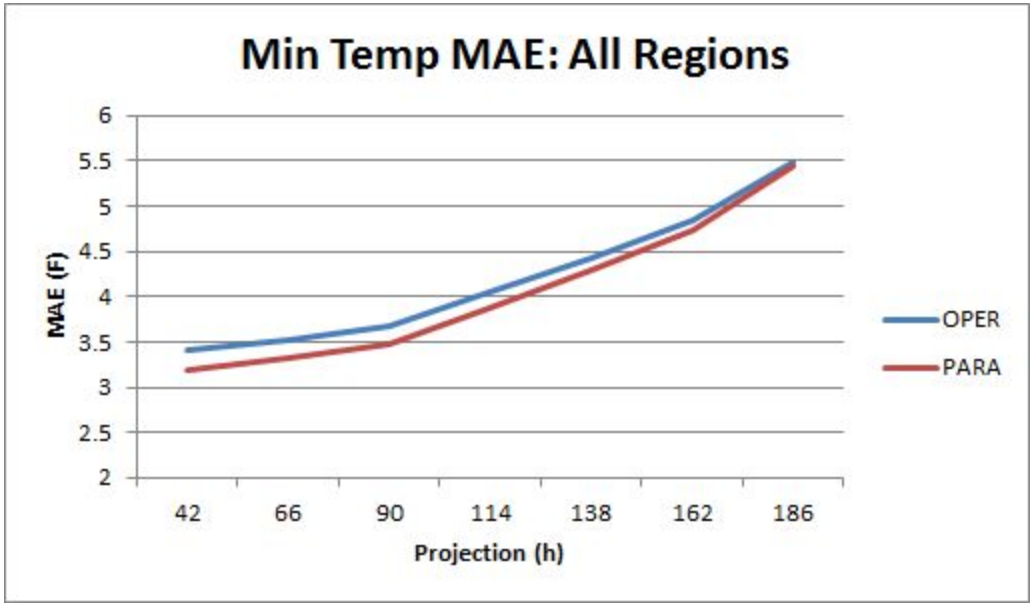




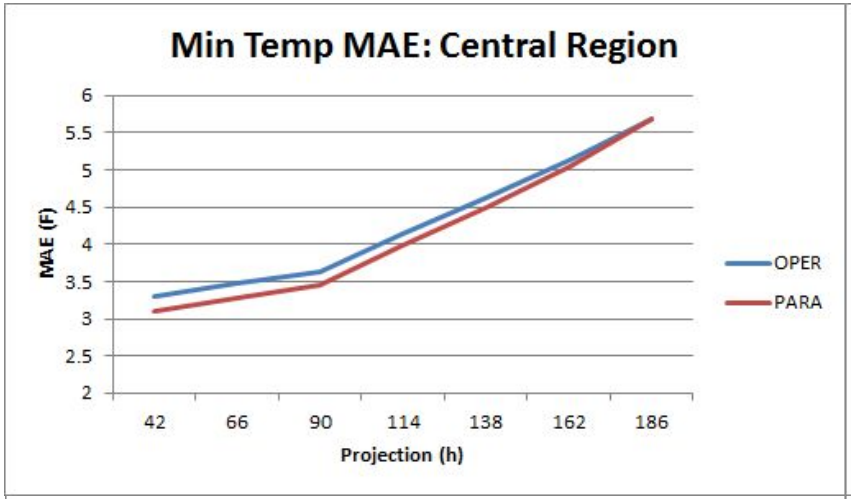


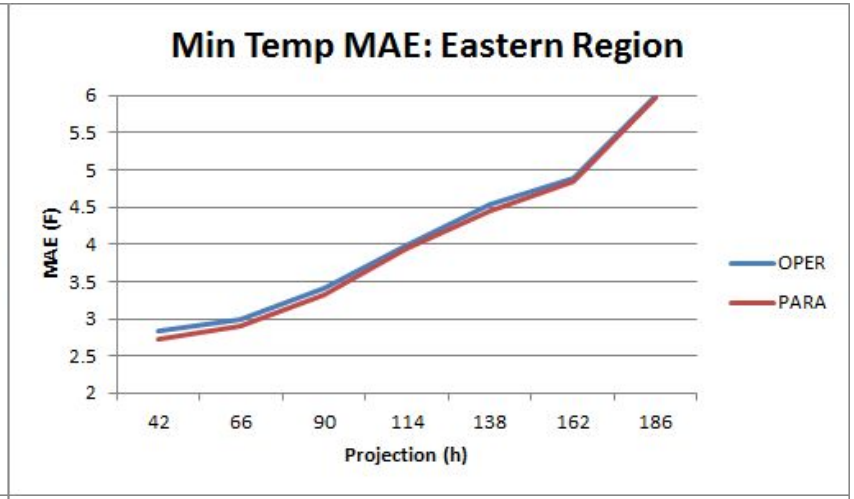


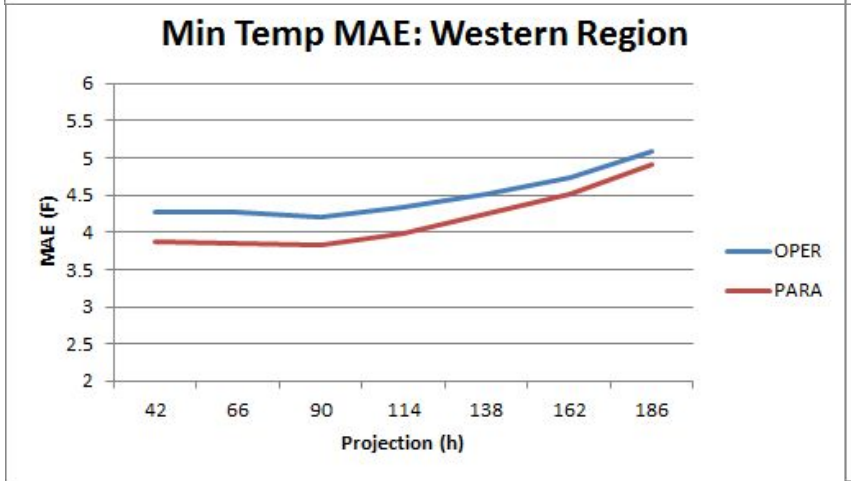
MAE - Nighttime Minimum Temperature Mean - March 2017

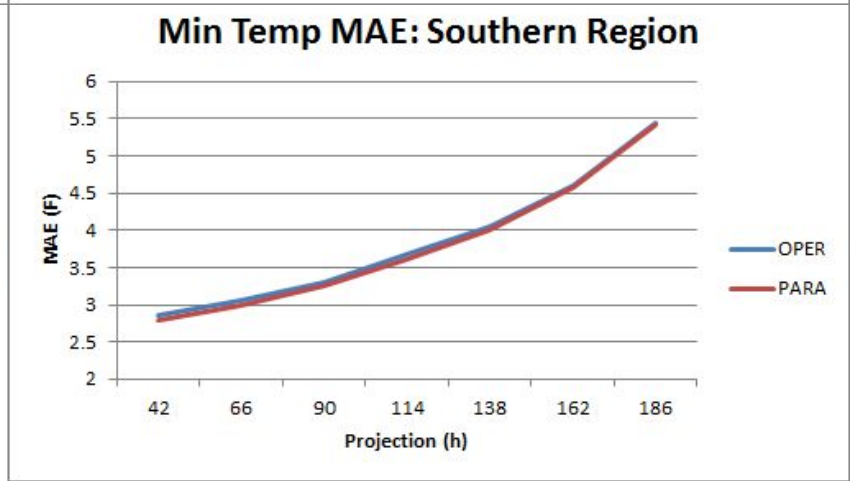


MAE - MinT Mean - March 2017

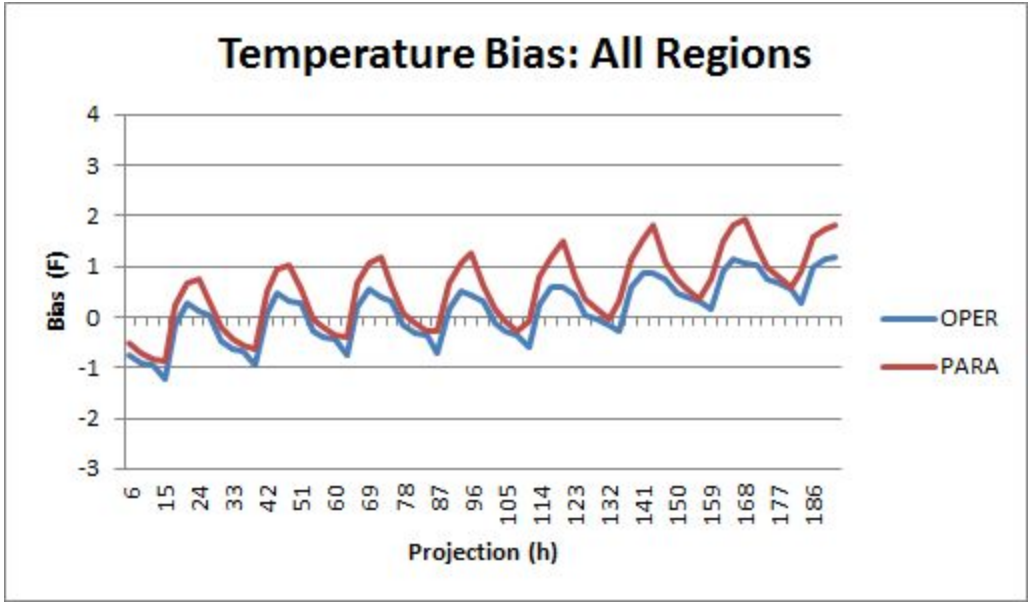




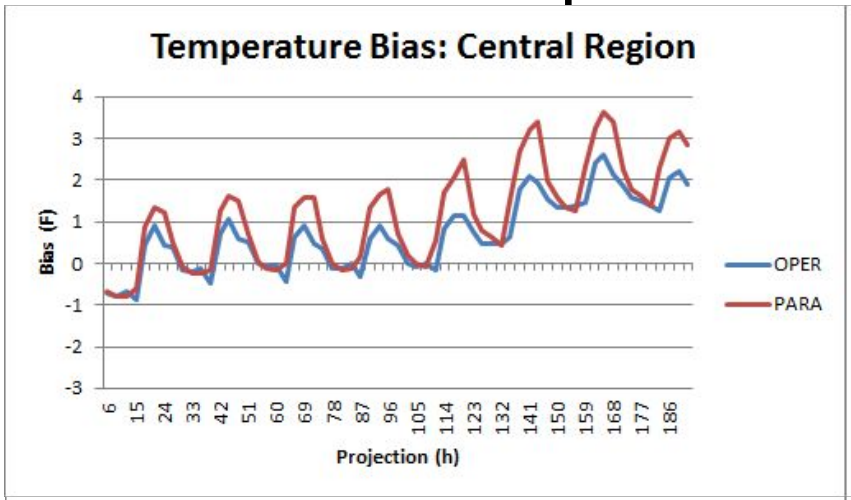


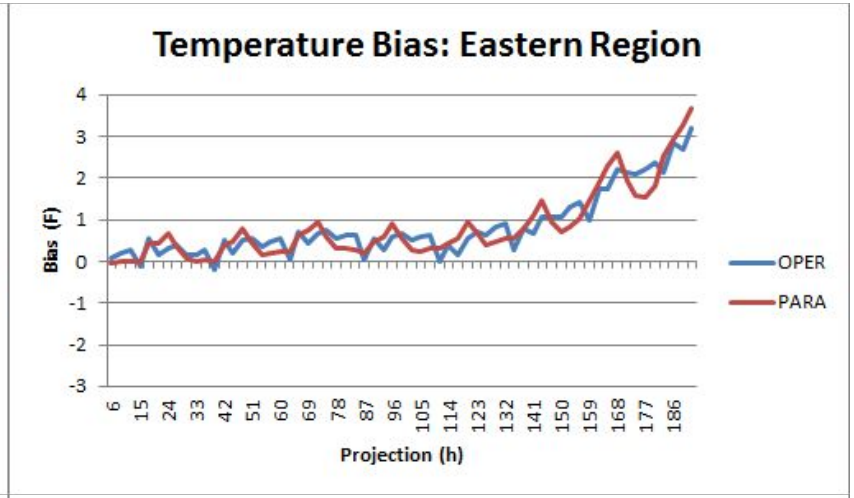


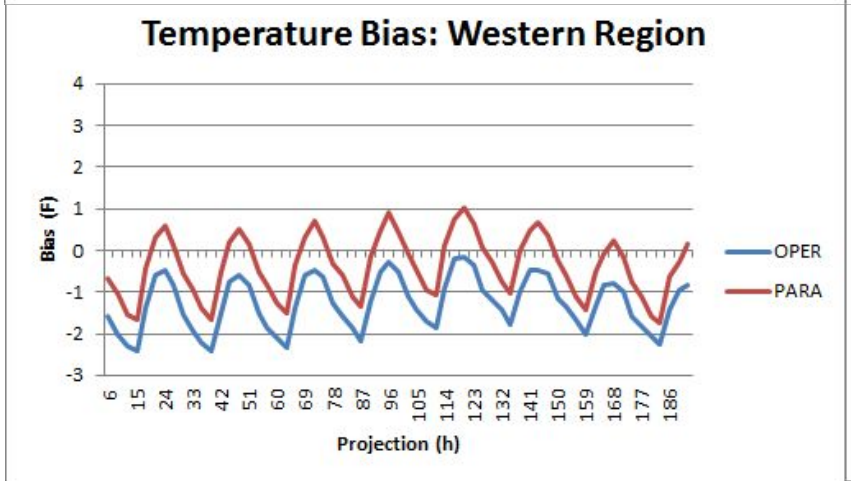
Bias - Temperature Mean - March 2017

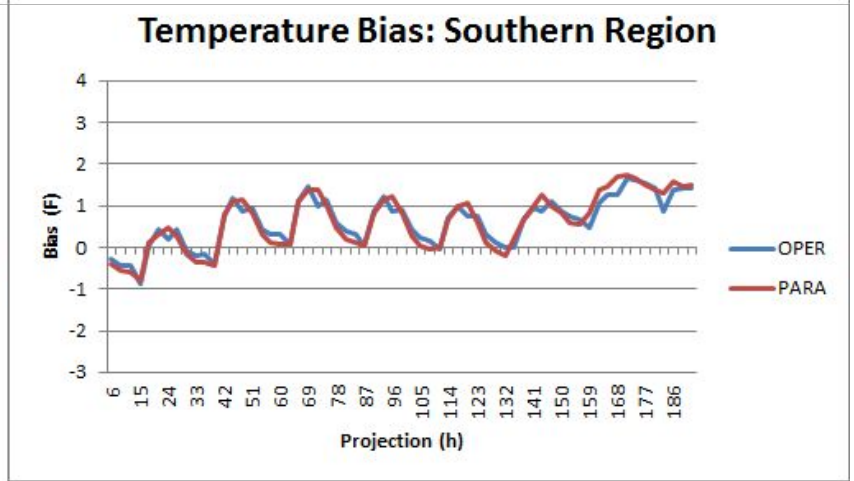


Bias - Temperature Mean - March 2017

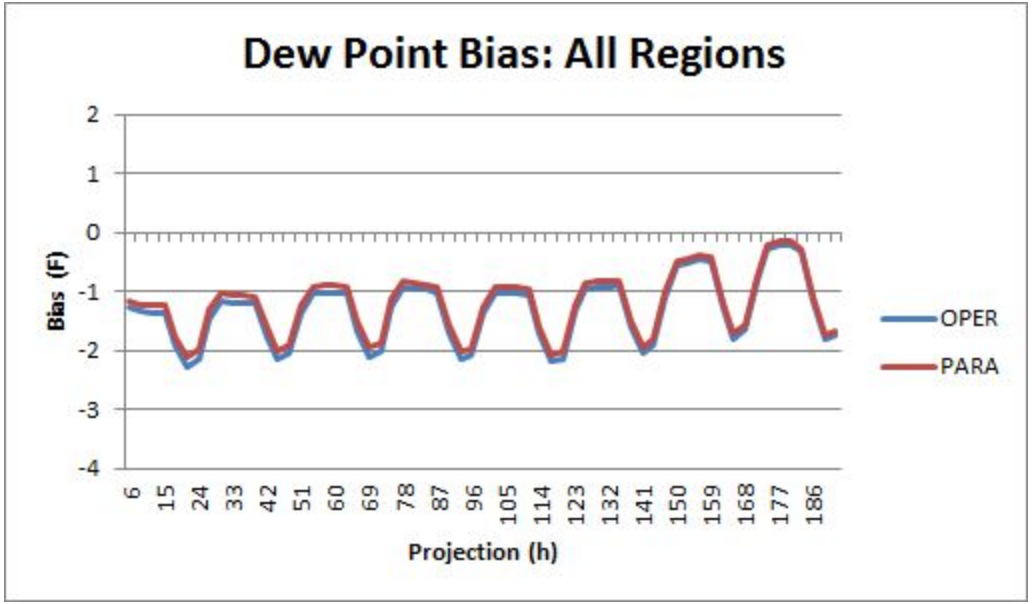




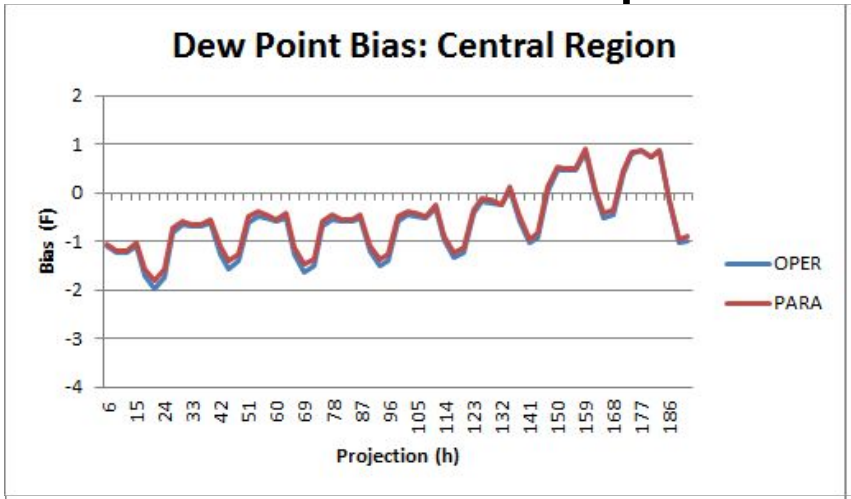


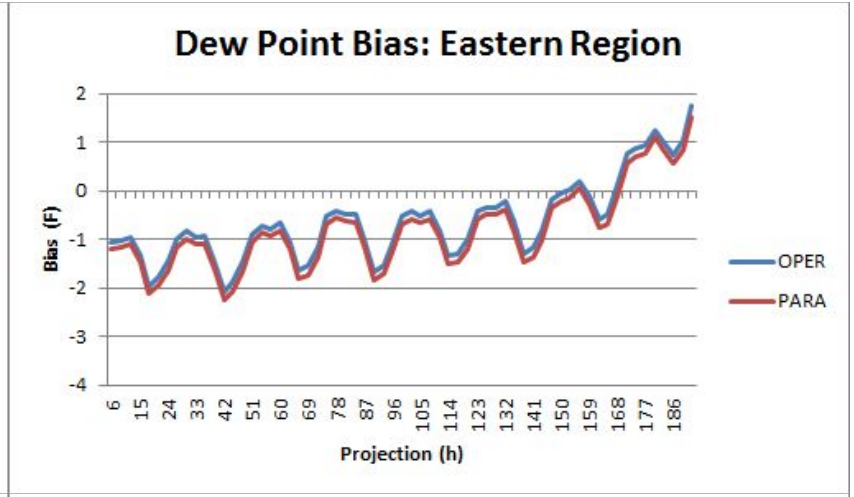


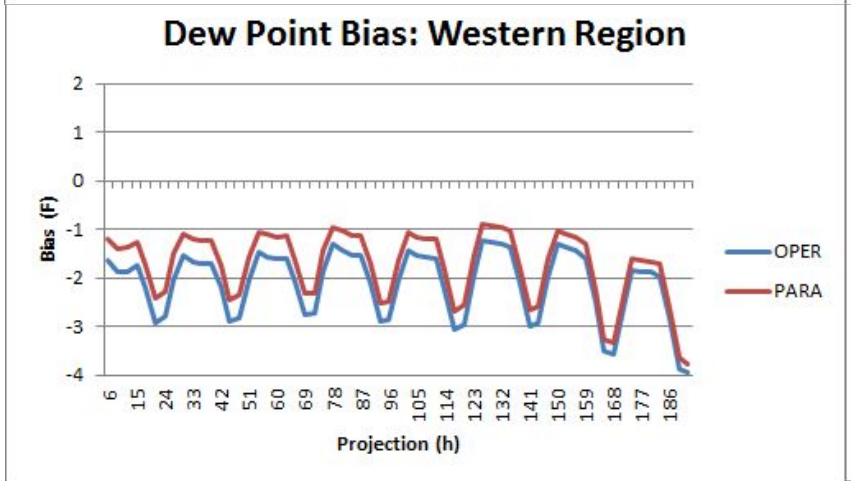
Bias - Dewpoint Mean - March 2017

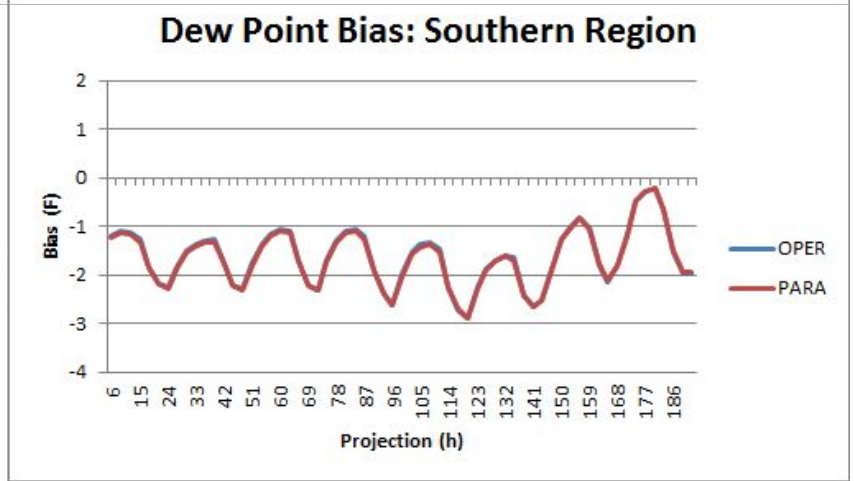


Bias - Dewpoint Mean - March 2017

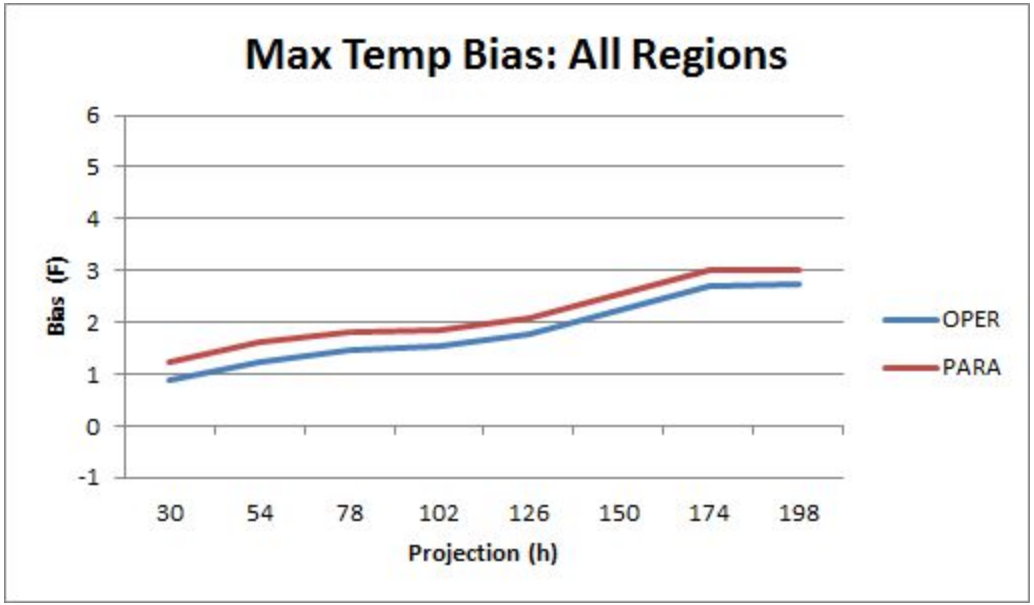




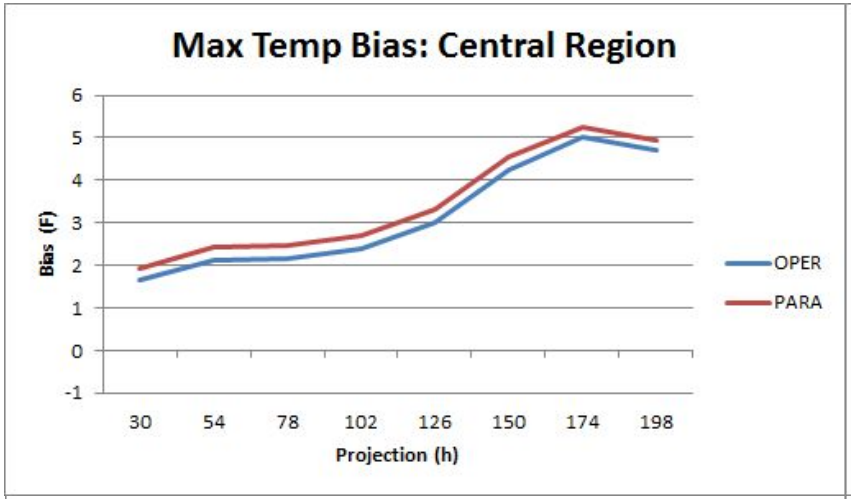


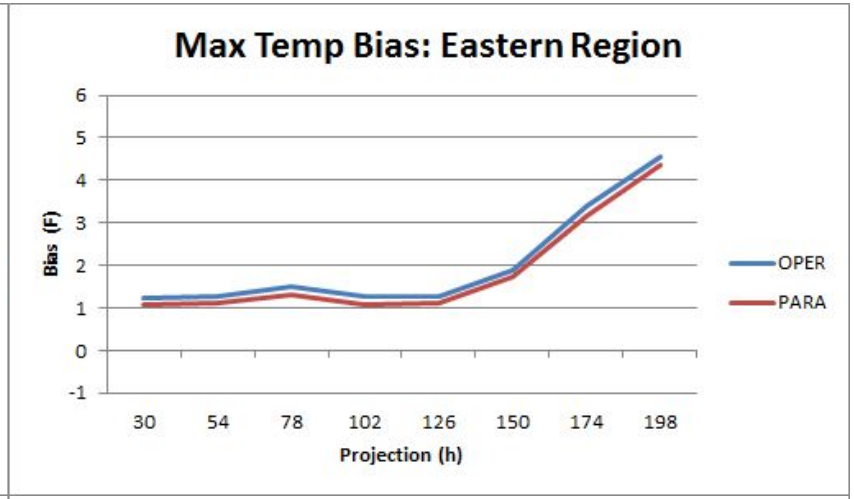


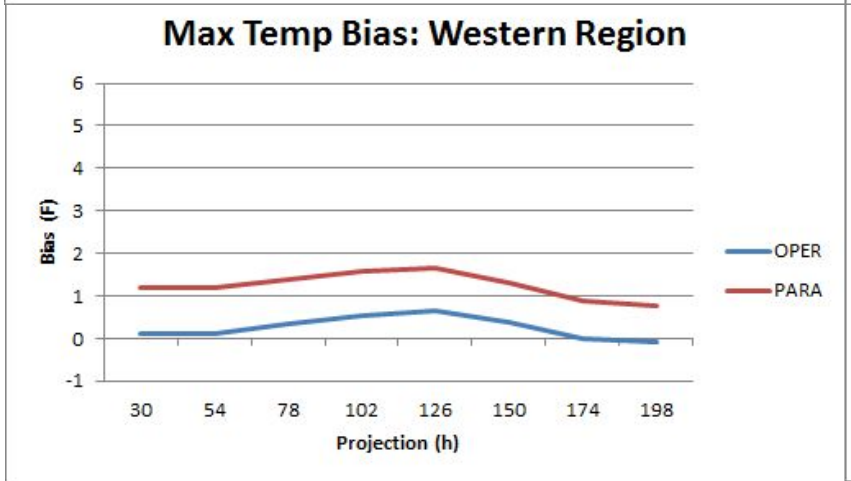
Bias - Daytime Maximum Temperature Mean - March 2017

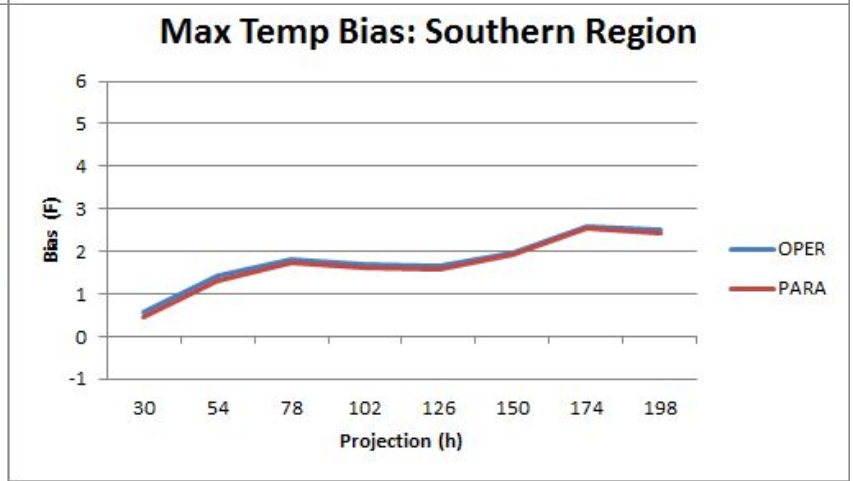


Bias - MaxT Mean - March 2017

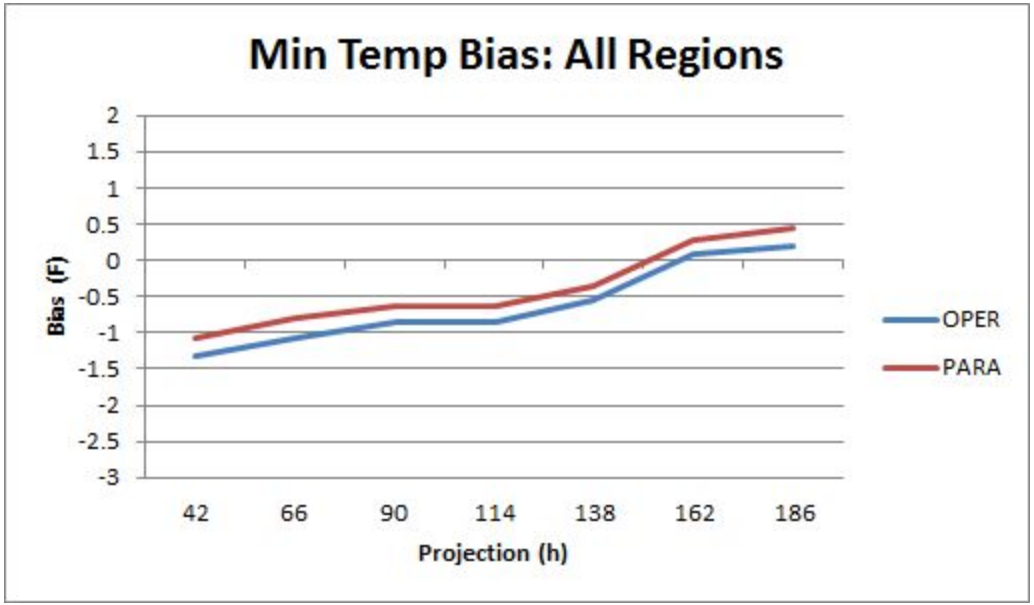




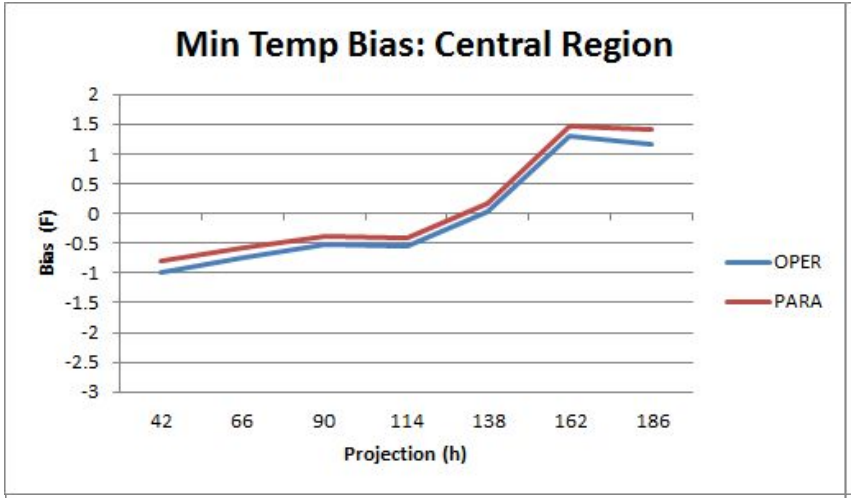


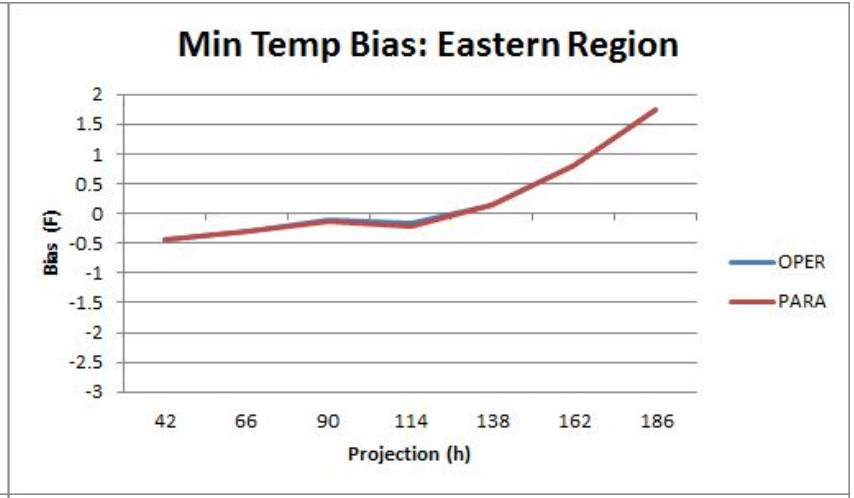


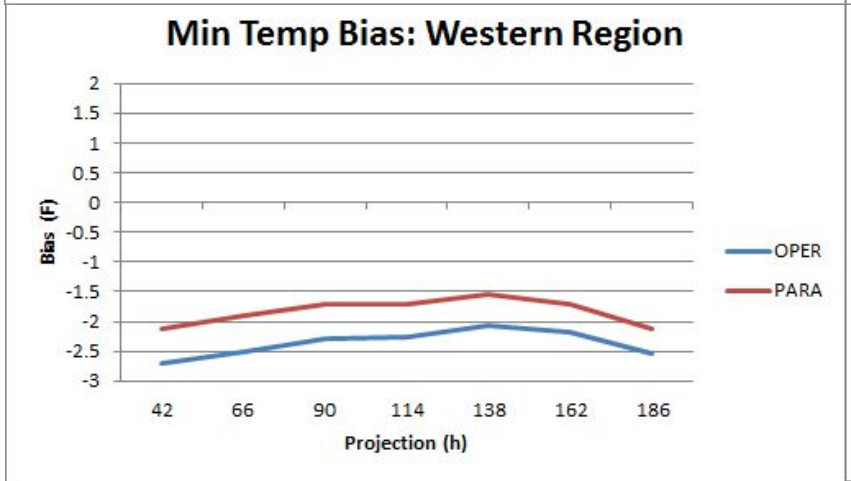
Bias - Nighttime Minimum Temperature Mean - March 2017

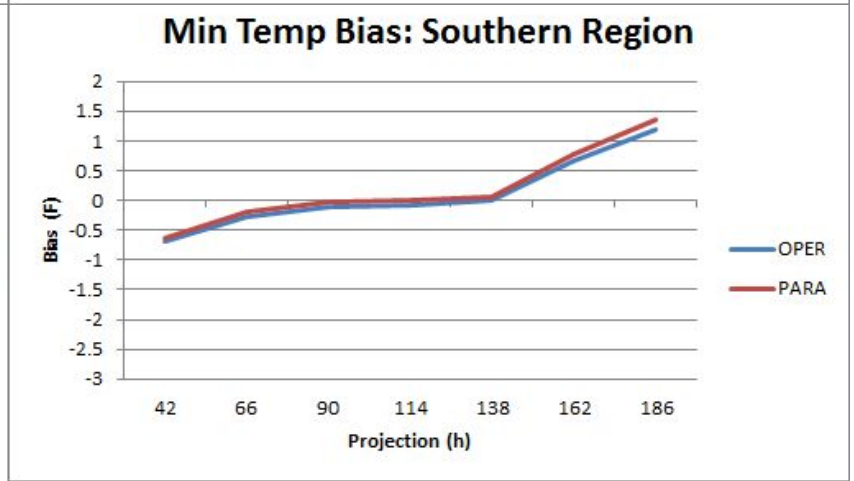


Bias - MinT Mean - March 2017



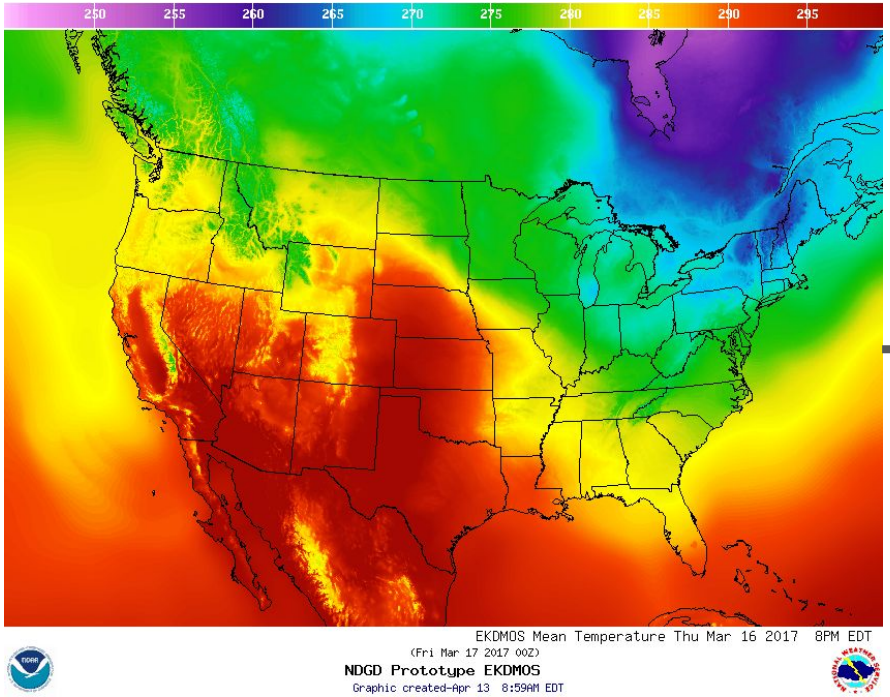


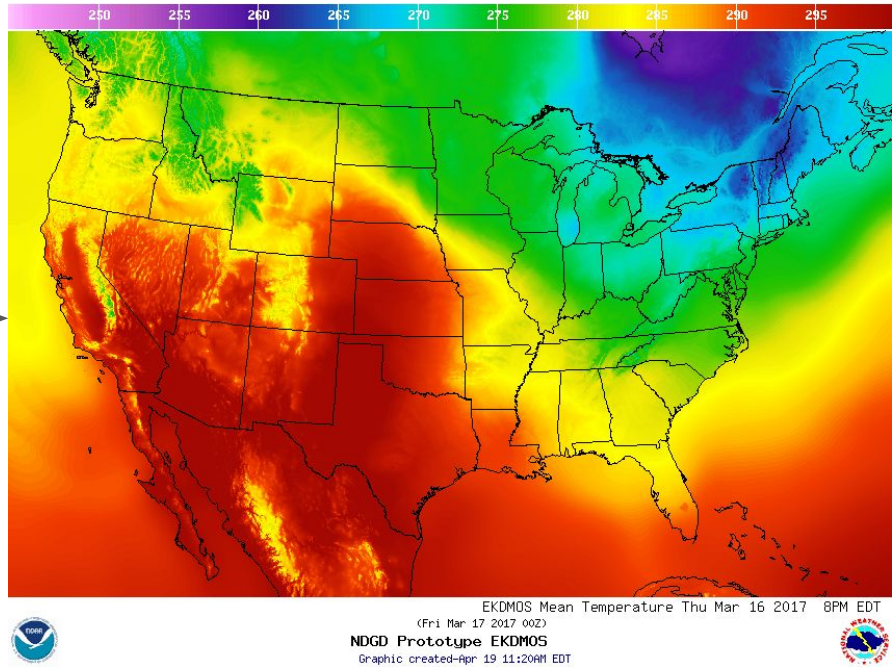




Verification

EKDMOS V2.1 and URMA grids were clipped again to match the NDFD grids

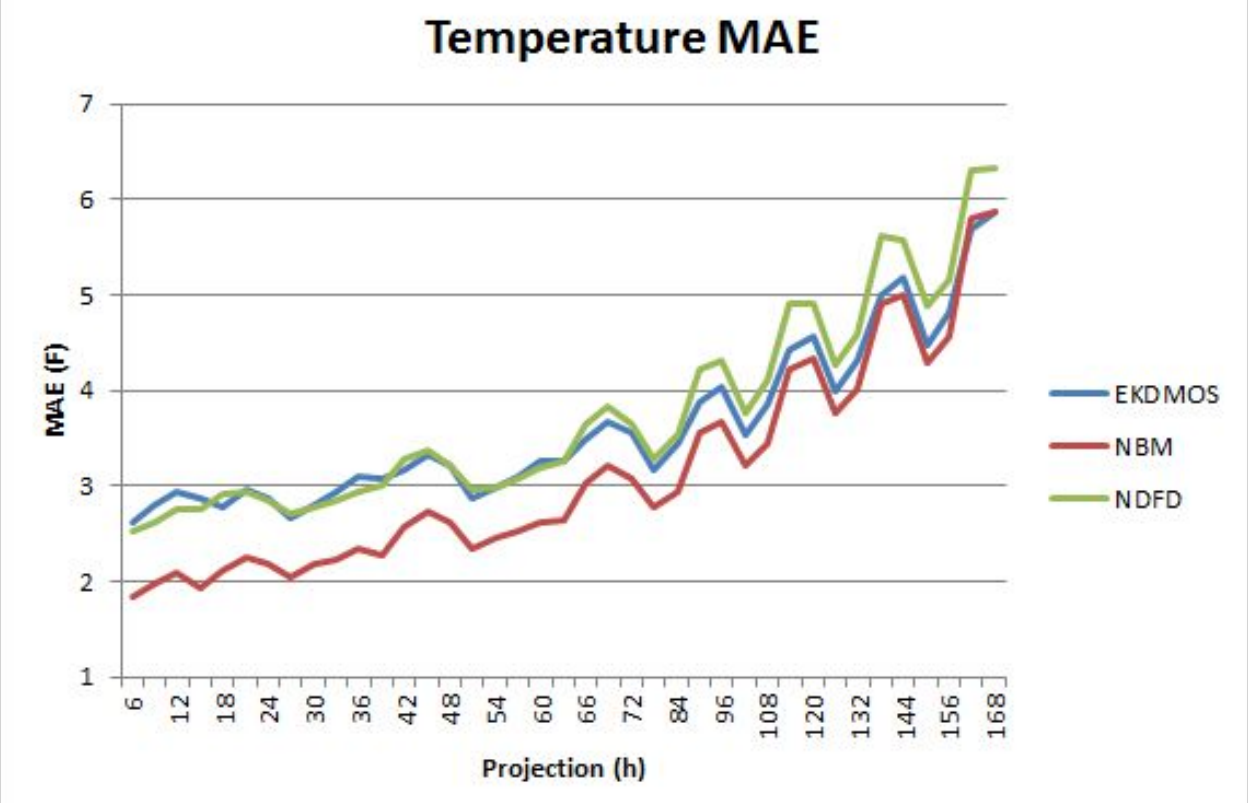




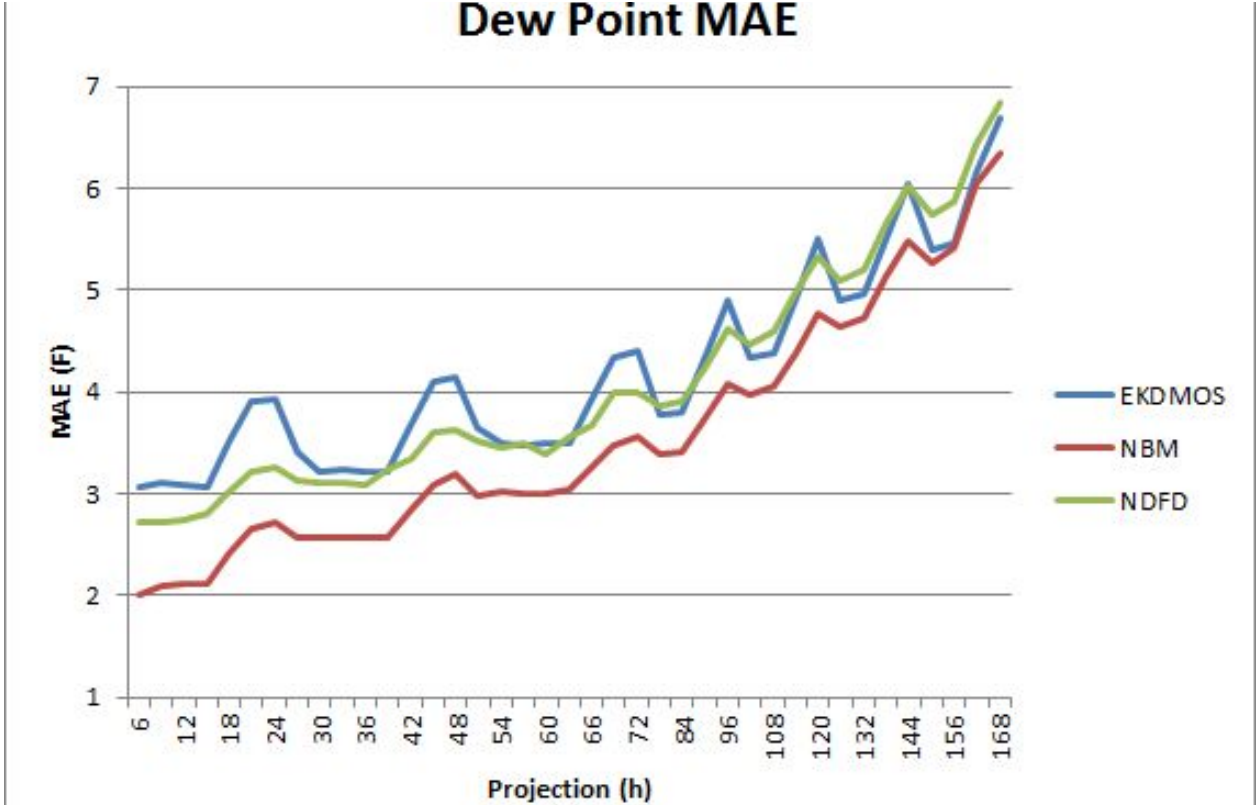
Verification Notes

- Verification performed for March 2017
- URMA grids were used as a “proxy for truth” for EKDMOS V2.1, NBM V2.0, and NDFD
  - NBM V2.0 is tuned to URMA
  - EKDMOS is tuned to station data, then analysed using the BCDG technique
  - EKDMOS is not tuned to URMA for this set of verification. Before EKDMOS is used as an input to NBM, it is tuned to URMA.

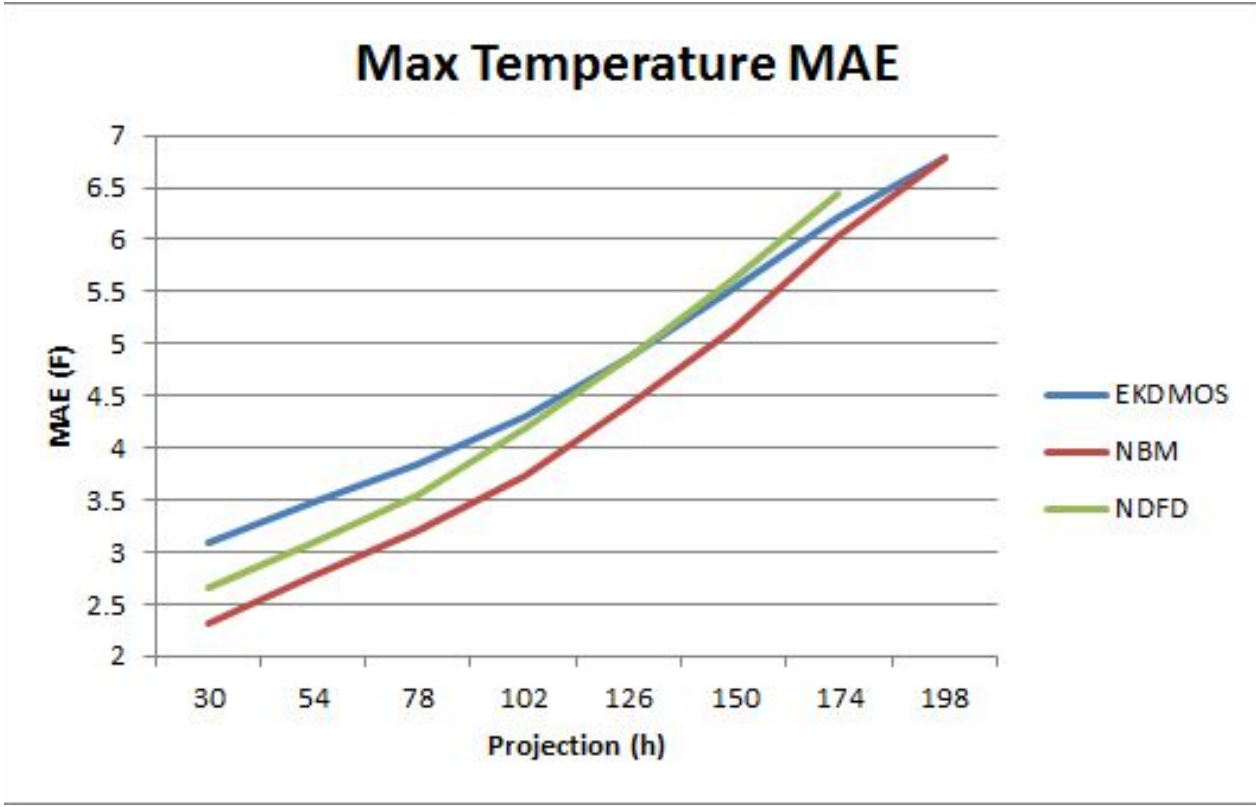
MAE - Temperature Mean - March 2017



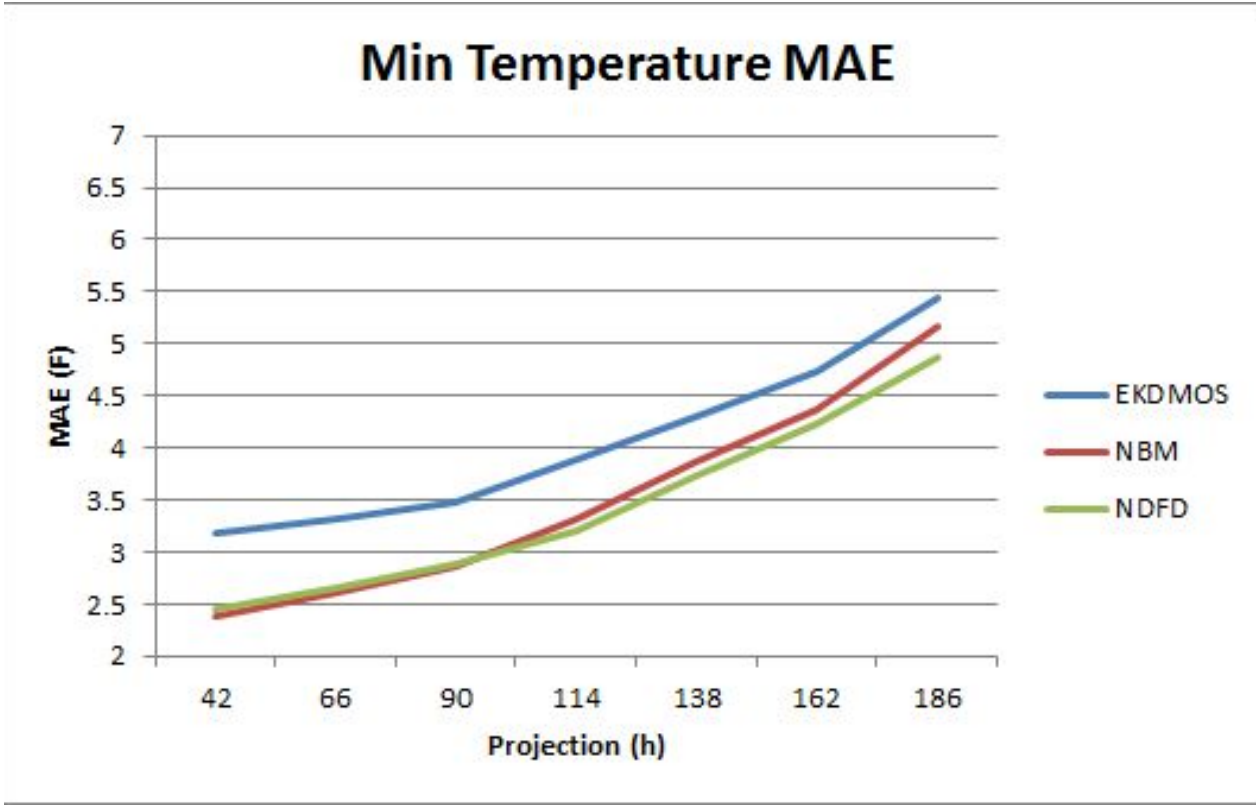
MAE - Dewpoint Mean - March 2017



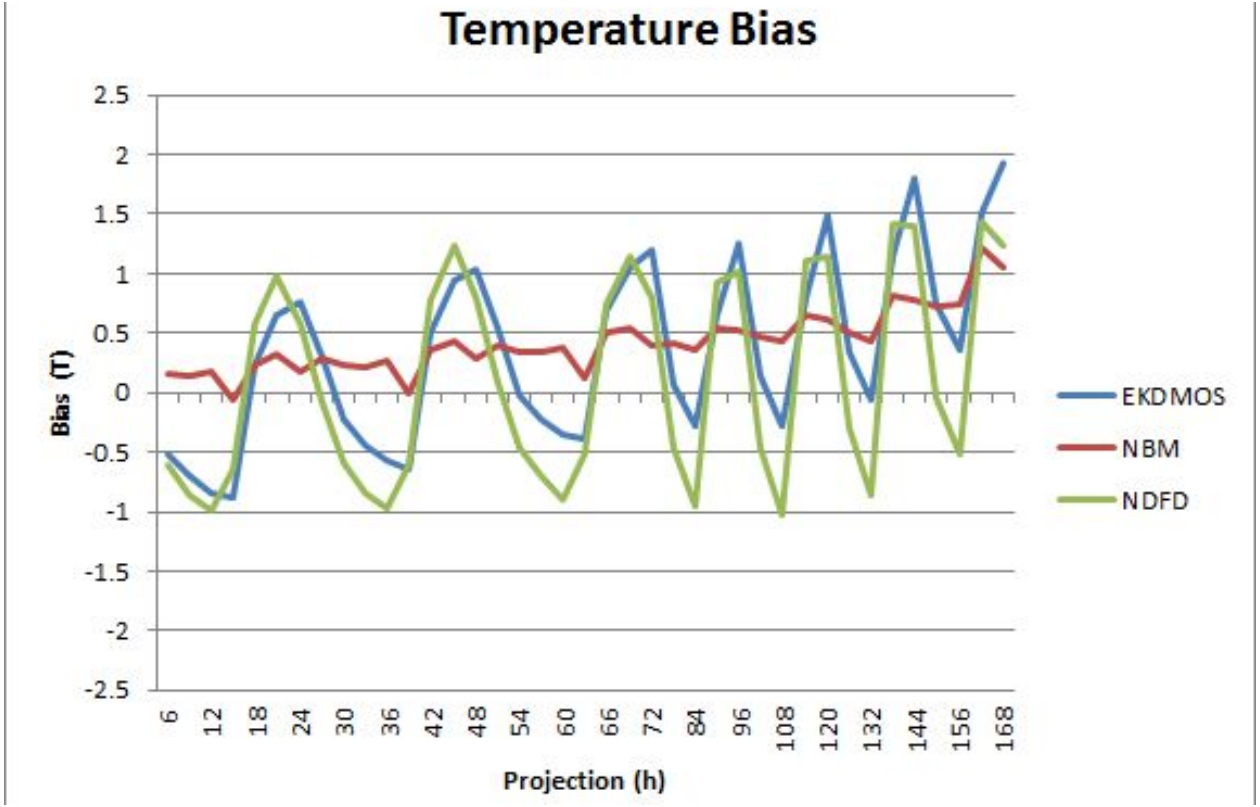
MAE - Daytime Maximum Temperature Mean - March 2017



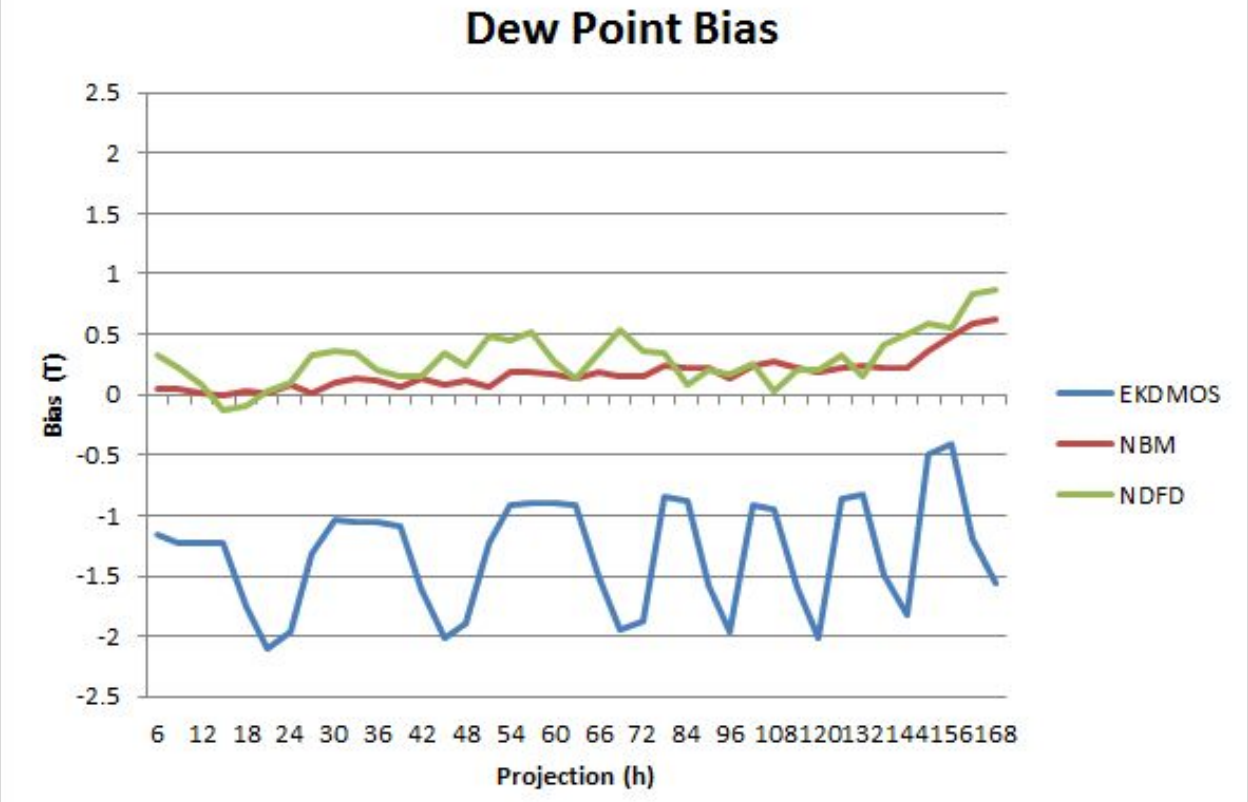
MAE - Nighttime Minimum Temperature Mean - March 2017



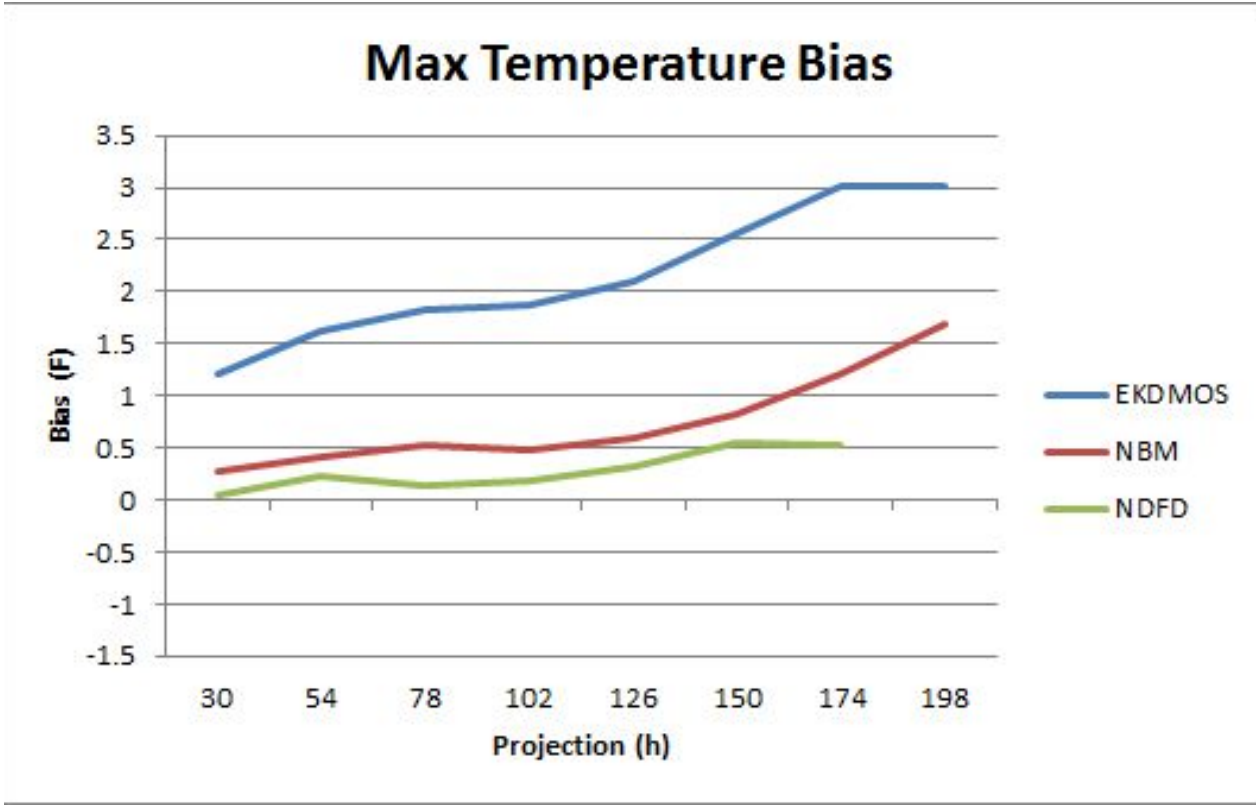
Bias - Temperature Mean - March 2017



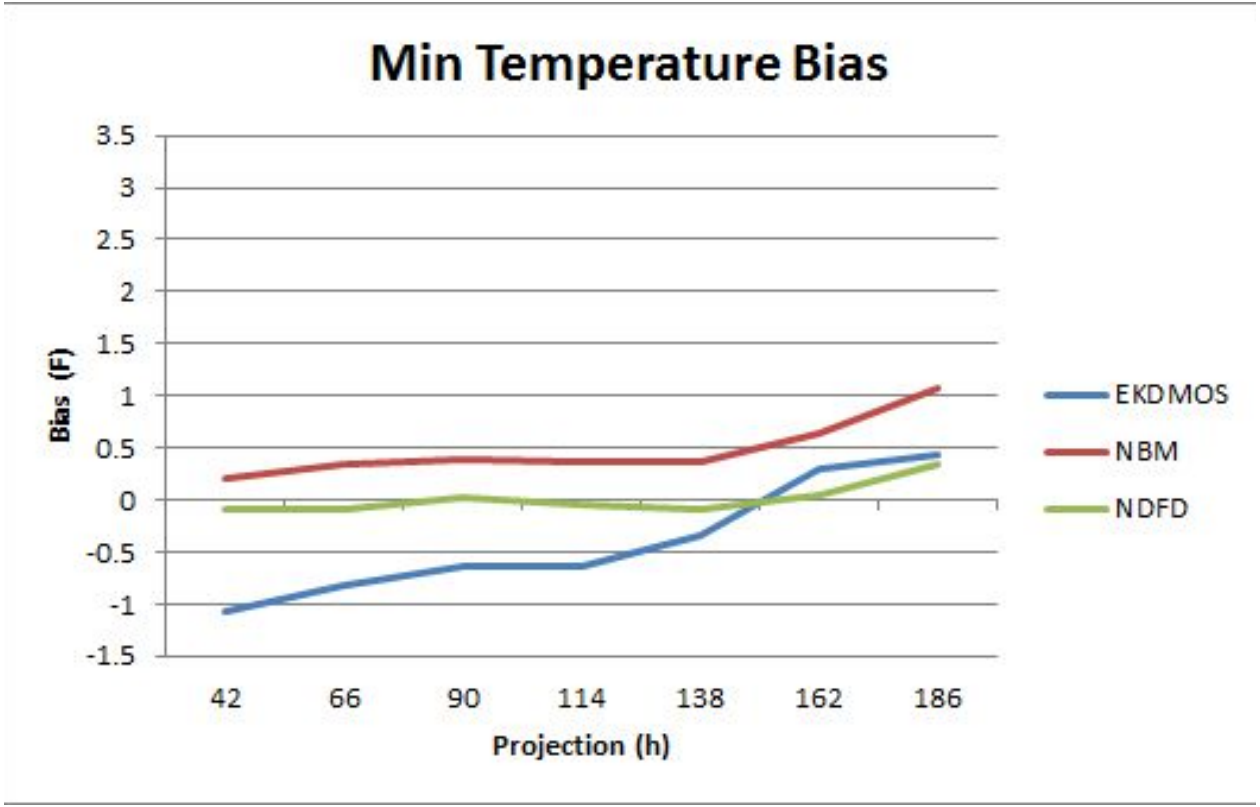
Bias - Dewpoint Mean - March 2017



Bias - Daytime Maximum Temperature Mean - March 2017



Bias - Nighttime Minimum Temperature Mean - March 2017



Updated EKDMOS images for temperature, dewpoint, daytime maximum temperature, and nighttime minimum temperature can be found at

http://www.mdl.nws.noaa.gov/~naefs_ekdmos/CONUSekdimgs_v2.1.php

Your feedback is appreciated!

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